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ABSTRACT

The project sought to determine whether certain National Institute of Education (NIE)-funded career education programs provided for personalization of instruction and whether they avoided tracking students into narrowly constrained areas. The first chapter discusses individualized instruction in historical and current perspective and presents sample definitions. The components of individualized instruction are described in the second chapter. Chapter three deals with special issues in individualized instruction including the role of counseling, problems in program evaluations, and common criticisms. A definition of individualized instruction as a basis for program review and assessment is presented in chapter four along with a discussion of tracking. Chapter five relates key elements of the definition to activities and programs observed in NIE-funded programs in Philadelphia, Charleston, West Virginia, and Glasgow, Montana. Presented for each program are: a brief description, detailed assessment results, and a discussion relating six questions about tracking to these programs. Where tracking appeared, it was attributed to external influences. A final chapter summarizes the project and discusses numerous conclusions for each program. A three-page reference list and appended program options, student interview responses, and participant selection criteria for some of the programs are included. (Author/MS)

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Individualized Instruction and Tracking in Career Education

A Research Report Submitted to the
National Institute of Education,
Career Education Program

June 21, 1974

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Chapter I

THE RESEARCH PROBLEM

Introduction

The National Institute of Education Career Education Program has sponsored programs that deliver career education services to a broad age range of students. The programs are intended to test four career education models--school based, experience based, home and community based, and rural residential. A principal goal of each of these programs is to provide a strategy for assisting individual students to attain self-satisfaction and self-realization through career awareness, career exploration and career specialization. An underlying assumption is that each participant receives a program tailored to his needs which will result in the attainment of his personal goals. The purpose of this research was to examine whether these NIE-funded career education programs provided for personalization of instruction and whether they avoided tracking students into narrowly constrained areas.

The first requirement faced by the research team was to define the concept of "individualized instruction" in a manner that would provide a framework for observation and assessment. Chapters I, II, and IV are particularly concerned with the development of an operational definition as a basis for subsequent evaluation.

In Chapter III, several special issues related to evaluation problems and criticisms of individualized instructional programs

are discussed.

The remainder of the report, Chapters V and VI, describes an application of the assessment strategy in three career education programs that offered direct instructional services to students. They were the Mountain Plains rural residential program, and the experience based career education (EBCE) programs at Research for Better Schools, Inc., Philadelphia, and Appalachia Educational Laboratory, Charleston, West Virginia. Aside from the direct task of examining individualization processes within these three programs, it is our hope that this report will contribute to the literature on research and evaluation of individualized programs.

Throughout the task of concept definition and description, we found that such literature was limited in both quantity and quality. Most references were either too general or too specific. No comprehensive methodology appeared to have been conceptualized or implemented. The strategy discussed in this report may provide a basis for a workable conceptual framework in evaluation of individualized instructional programs.

Historical Background

Individualized instruction is a very old tenet of educational philosophy. Certainly the Athenian education of young gentlemen with the Socratic method of letting each student discover truth for himself, and the system whereby wealthy youth were each provided with a "pedagogue" responsible for his intellectual, moral and physical development with personal advancement in all areas as a

goal, would qualify as individualized instruction. (Atkinson and Maleska, 1964). The roving academies of scholars described by Chaucer would also qualify. Later, Rousseau in his revolutionary work, Emile, espoused a naturalistic educational philosophy and incorporated three major principles of American educational philosophy: growth, pupil activity and individualization. Rousseau especially emphasized a teaching methodology based on maneuvering the pupil into wanting to learn by building on his interests and inclinations. He regarded each individual as born with a distinct temperament and chided teachers of his day for giving the same exercise indiscriminately to all children. Learning, he claimed, came from liberty which in turn incorporates individualized restraints based on consequences. Revolutionary in its time, Rousseau's masterpiece became the basis for the later educational reforms of Pestalozzi, Herbart, Froebel and many others, (Atkinson and Maleska, 1964).

It is important to note these early philosophies and practices in order to provide a proper perspective for the discussion following in this paper, and to understand educational reform and experimentation as part of a cycle relating to events and ideals of the larger gestalt. However, lest recent attempts to innovate particularly in the area of individualized instruction be regarded too cynically, it must be remembered that these efforts are being conducted, for the first time, with the education of all students in mind including those who only in this generation are attempting to enjoy the benefits accorded the majority culture. The problems and ideals of earlier similar philosophies are compounded geometrically when teachers and students have the same variety of individual differences observed by early educators, but no longer have the

benefits of a tutor-student relationship. Nor do all students enter the system with the highest socioeconomic background.

Given our national goal of providing equal education opportunities to all students, individualized instruction is no longer an interesting intellectual concept, but has become a necessity. At the end of systematic education an enormous variety of personal, social and economic choices exist for the individual. At the beginning of the process students enter with the complete range of aptitudes, interests, and backgrounds. Many times the former two have been strongly influenced by the latter. It is the charge of the intervening educational process to sort out the interactive effect of the three variables, to compensate for deficiencies resulting from the influence of the society, and to develop each individual maximally so that he has the ability to exercise his right to make choices at the end of the process. One purpose of this paper is to report current thought and practices regarding the processes and problems of individualizing instruction and to try to systematically separate the many aspects of the process.

Current definitions

As an introduction to the literature delineating the components of individualized instruction, it will be useful to consider some sample definitions.

Tosti and Harmon, (1972) provide the following definition: "Individualized instruction is a function of the frequency with which the decision to change the instructional presentation is made as

a result of the assessment of an individual student's achievements, needs or aspirations".

This definition suggests that a number of factors must be present: first a consideration of the student not only in terms of his rate of academic achievement, but also taking into account personality factors. Secondly, it can be inferred that more than one instructional option must be available. Third, that the rate of providing such options must be a function of the student needs rather than teacher or temporal needs to move on to the next chapter or to begin a new activity because the time for social studies, for example, is over.

Torkelson (1972) observes that programs of individualized instruction can be viewed on a continuum from most liberal to most conservative. The former might be observed in a situation such as a free school where the student can decide what he will learn, how he will learn it and when. The student may also choose to learn nothing at all, althcugh, as Torkelson points out, this choice would itself be an educational activity in that the student will learn the consequences of non-participation. A more moderate form of individualization would include student choice, but would not allow the choice of non-participation. It would involve student selection of goals, methods and time units. The most conservative form of individualization on this continuum would limit student choice to optional ways of learning prescribed curriculum.

Clearly the point of emphasis in this definition is the number of choices available to the student. But it also implies that in individualization the student is a decision maker and, at a minimum, optional learning strategies must be present.

Davis (1972) discusses individualization in terms of underlying theoretical constructs. The first theory he refers to is the "cognitive structure" theory and is essentially Piagetian in nature. Simplistically, the body of ideas in an individual's head is similar to a partially assembled jigsaw puzzle. Since the individual can be the only one who knows what is there and what is missing only he can make choices as to what the next piece must be. It is futile for the teacher to provide either redundant pieces or pieces which relate to little else. It is the function of education to provide a variety of choices which can be related generally to the participants' developmental stage.

Davis calls the second construct "the cultural push" theory of learning. He observes that cultures emphasize values by doing them. Many of these come from sources other than the school, for example, reading in the home, but he suggests the school can teach more effectively by becoming a more viable and vital subculture that values what it teaches. This theory has implications for individualization in terms of establishing a reward system stemming from personal interactions both with instructors and with small peer groups.

The third theoretical construct relates closely to the first

and is referred to simply as programmed learning and task analysis. Davis considers these to be related to individualization in that an effort is made to break learning into very small parts which may be used to assess the individual's needs and more accurately provide the missing puzzle pieces described in the cognitive structure theor

The significance of the Davis contribution is perhaps not so much in content, but rather in that he points out that individualize instruction rests on more than methodology. It also relates to conscious or subconscious beliefs about how learning occurs. While theorizing is often thought to be time wasting it may be important for practitioners to consider this idea. With some understanding of how learning may occur, components of projects may be evaluated as essential, possibly helpful and extraneous. Indiscriminate selection of faddish techniques could be avoided.

This section of this paper has provided some thoughts on individualized instruction in a historical and current perspective and an overview of certain principles relating to individualization. The three definitions discussed above are a sample of current thought. These were included to illustrate in a general way the great variation in present thinking about individualization in terms of specificity and generalizability, in terms of several levels of abstraction and in terms of schools of educational thought concerned with the issue. The second chapter of this paper will discuss possible components of individualized instruction.

CHAPTER II

COMPONENTS OF INDIVIDUALIZED INSTRUCTION

There is a great deal of recent literature available which describes individualized instruction. Some authors describe components in a general way, others describe programs, and others deal with specific issues, such as the evaluation of individualized instruction. All of these topics are important to this paper. This chapter will deal with the first two categories. The third chapter will discuss specific issues which seem to have special significance to this project: individualized guidance and the implications of such for disadvantaged groups and for issues related to sexism in education, and secondly, the problems involved in the evaluation of individualized instruction.

While the literature reviewed for this paper is only a sample of what is available, it becomes clear in a very short while that much of what is written is redundant. Certain factors seem to be basic to most descriptions while additional components appear to be a function of the comprehensiveness of the model. While a discussion of components could be presented in a number of formats, the approach used here will be essentially chronological taking into account both program and student. It will be "chronological" in the sense that individualization components will be discussed as follows: first, what would occur first in an individualized program? How are such programs developed and what are the initial events that happen to students who enter an individualized program? Secondly, what occurs when an individualized program is operational?

What are the components and how do students, teachers and other involved parties function within it? Finally, what are the products of individualized instruction? That is, what, if any, are the products of the program, and what is the impact of the program on the participants?

Preliminary Components

Developmental Strategies for Programs

In planning a system of individualized instruction, Kapfer and Kapfer (1972) suggest that the following issues must be addressed: What are the goals of the school or system? What are the expectations of the community, of participants, of the parents of participants when they are involved? What educational experiences will promote attainment of objectives? How can the experiences be organized most effectively? How can attainment be measured? What support systems, such as those found in the community, will be needed? Larry King, (1973) describing the development of a system of individualized vocational instruction, lists the following steps: select the topics to be individualized, write behavioral objectives, categorize and organize the objectives into levels of difficulty, and design alternative learning activities. Henrich and Goldsmith, (1971) include many of the same tasks in their analysis of program development. For example, following selection of the topic or unit to be individualized, such as "construction", the program developers must identify related tasks within functional areas, for example, "carpentry". Those identified tasks should be verified through interaction with experts in the specified fields. Following the identification and verification procedure, developers must determine

what knowledge and training will be necessary for students to develop identified competencies within the task area. These knowledges and skills must be translated into sequential behavioral objectives. Having established the objectives, innovative materials must be developed and tested. The characteristics of such programs and materials will be discussed in subsequent paragraphs.

It is important to recognize, however, that even when a system can clearly specify developmental tasks, the over-riding concern of planners must be the vast number of differences participants will bring to the program. That is, in selecting goals, objectives, procedures and materials, an individualized program must provide a wide variety of options, possibly going so far as to open the option of students performing all of the aforementioned tasks themselves.

Kapfer and Kapfer, (1972) have developed a comprehensive list of the individual differences program developers must accommodate. These include provisions for variability among students in the rate they achieve; readiness skills they possess on entry; knowledge, understanding and attitude development; verbal development; motor skill development; responsibility development (along a continuum from external shaping of responsibility to student valuing and choosing such behaviors); readiness for self-motivated learning, expectations and reinforcement.

The examples cited above are relatively comprehensive lists of the sorts of considerations and activities involved in developing a system of individualized instruction. To summarize and organize these preliminary steps, program developers must:

- Develop a list of questions and concerns to be considered during the planning phase such as those observed by Kapfer and Kapfer, for example, student characteristics and community expectation.
- Define the program of study to be individualized in discrete functional terms. This appears to apply as a management principle whether the entire curriculum is to be individualized or one component of it.
- Involve appropriate agencies in the planning: governmental, community, participant representatives or participants themselves.
- Develop a variety of objectives, methods and materials within the constraints listed within number 1, above, and provide sufficient time for field-testing, feedback and revision.

The following paragraphs suggest planning components relating to the individual student.

Student Assessment and Planning

In relation to the individual student, it would appear that there are at least three processes which must occur prior to entry into an individualized instruction program.

First some type of assessment must take place. Tosti and Harmon (1972) refer to this procedure as "prescriptive management".

The level of sophistication, the comprehensiveness of the assessment procedure and the focus of the assessment varies considerably. Theoretically, the list of variables suggested by Kapfer and Kapfer (1972) described earlier on which learners may differ appears to be a comprehensive framework for assessment. Scanlon (1970) describes the assessment techniques of the Philadelphia Individually Prescribed Instruction (IPI) program. At the outset a placement instrument is completed for each student. Information regarded as necessary for a prescription includes the student's general ability level in a subject, his degree of mastery of each skill, information relating to progress in previous units, general maturity and the learning characteristics of the student including learning style and reaction to various instructional settings. Kinghorn and Poden (1970) include many of the same assessment variables in their program but go on to describe the process as being one whereby the teacher develops such a profile and then allows for student judgement about the meaning of the profile. Hamilton and Jones (1971) suggest that such assessments and reactions to them are more useful when they have some predictive power, for example, comparing student profiles and desires to tables such as those developed for project TALENT. This procedure can become quite sophisticated as in the program described by Katz (1970) where background data and student goals are fed into a computer which provides returns on the reality potential of the combination.

Esbenson (1972) raises the question as to whether such assessments should be focused more on the students' deficiencies (as the case in most academic programs) or on the students' interests.

He advocates the latter whereas other writers, such as Dauw (1970) believe that individualized instruction is most beneficial to students with many deficiencies, for example, the potential dropout. Indeed, he believes that participants should be recruited on the basis of their deficiencies, for example, poor attendance, poor attitudes and/or social and emotional problems.

Another aspect of the assessment process which will be discussed in Chapter 3 but bears notice here is the problem of whether the assessment should reflect the student's current status as measured by achievement and attitude inventories and plan accordingly. Or, whether the intervention should reflect a potential which is not apparent in results. This question is significant when considering the needs and potential of minority groups, disadvantaged groups and women who may not be aware either of their own potential or of the available options. (Martin and Martin, 1971; Gallington, 1973).

A second process which may occur in the pre-entry stage is student involvement in planning, or student-parent involvement. Ullery (1971), Torkelson (1972), and others insist that student involvement in goal setting may be the single most important facet of an individualized instructional program. Esbenson (1970) describes a program in Duluth, Minnesota where the school provides a detailed catalogue of learning options, with specific objectives, to the students and their parents. Together with teachers, students and parents negotiate each six weeks what the student will learn. Students may also develop their own units.

While student goal setting may be one aspect of individualization, it appears to be a practical function of the age of the participants, as well as a philosophic consideration as previously

described, (Torkelson, 1972). Hamilton and Jones (1971) say that student involvement in planning need not and should not be a function of age, but that students should be taught decision making strategies at least by the time they reach junior high school, and that these strategies may be crucial to career exploration and preparation.

Although it would seem to be an important element of the pre-entry process, only one writer comments specifically on the need for individualized orientation to the program, and the need for careful monitoring and counseling during the adjustment period. (Frase, 1972).

In summary, there appear to be three potential prepatory activities for students entering an individualized instruction program: assessment of needs, abilities, interests and characteristics; involvement in planning, and individualized orientation and adjustment. Most of the activities related to these areas are suggested as necessary to program success in the literature although the level of detail varies. There is no evaluative data to assess the significance of each procedure to the final results of the program.

Operational Components

The operational features of individualized instructional programs are most frequently discussed in the literature. What the program is and how the student functions within it afe basically the same, therefore, the distinction between program and student will not be the format for this section of the discussion. By way

of introduction, it may be observed that while a great deal has been written about operational components, in fact the essential features are very common and the degree of innovativeness drops off rapidly as the numbers of program descriptions increase.

One of the most common features of individualized instruction programs (and many other education programs) is the use of behavioral objectives or performance based competencies. (Henrich and Goldsmith, 1971, Torkelson, 1972, Kinghorn and Poden, 1970). As in other programs, these objectives are often categorized, sometimes into levels of difficulty (King, 1973), sometimes by degree of abstraction (Kapfer and Kapfer, 1972) and sometimes in terms of skills such as those related to a particular job, (Ullery, 1971, O,Donnel and Lavorini, 1970). The most significant aspect of objectives in terms of individualization, however, is the relationship between objectives and student needs. If the program is prescription based, presumably each student has somewhat different objectives or combinations of objectives (Scanlon, 1970). Other programs are individualized in respect to student variance in the rate at which they achieve common objectives (Frase, 1972, Ullery, 1970). This has sometimes been described as "purposeful pacing" (O'Donnel and Lavorini, (1970) which is difficult to distinguish from traditional classroom pacing sometimes known as tracking. Some writers, however, view "rate" as the basis for individualization, not simply in terms of mastery, but also taking into account changing the activity (Tosti and Harmon, 1972).

The latter, "activities" or "options" are the most frequently mentioned components of individualized programs and, in many

instances, are the sole basis for the assertion that a program is individualized. Almost all writers agree that basic individual characteristics include the ways in which a student learns and his interests. (As opposed to what he "needs", an issue on which there is some disagreement). Some writers assert that it is not the content or methodology of the options which are significant, but the fact that choices are available (King, 1973; Kapfer,et. al. 1970; Kinghorn and Poden, 1970) and the process of learning how to make decisions (Davis, 1972). Making choices is viewed as essential to increasing motivation, fostering commitment and developing responsibility. Programs which illustrate this kind of focus include student negotiated contracts such as those described by Esbenson (1970), the Individual Learning Packages of Kapfer, Kapfer etal (1970) in the Life Internship Programs; and independent study projects such as those described by Herd (1972).

Other programs systematize motivation and reinforcement beyond that resulting from student commitment to personal choice. These programs tend to either emphasize programmed reinforcement found in technology or in frequent performance evaluations. Among these are computer assisted learning (e.g. CAP, Herd, 1972) learning packets, (Ullery, 1971), audio-visual instruction, (e.g. AVISTA, Herd, 1972) and Individually Prescribed Instruction (Scanlon, 1970).

One of the areas in which many of the latter types of programs are frequently criticized is in their apparent lack of emphasis on inter-personal interaction as a learning tool. (Tucker, 1973; Tillman, 1972; Nichols, 1972; Duda, 1970). Deciding whether this is a justifiable criticism is not the purpose for this paper, but

the point must be made that many writers do view "purposive interaction" (O'Donnel and Lavorini, 1970) as an important and even essential learning tool. The variety of interactions among different and changing student groups and between students and teachers are described by King (1973), Kapfer, Kapfer et.al. (1972), and Herd (1972). Frase (1972), suggests that the amount of teacher involvement with a student, and the amount and type of student interactions are important variables of individualization which must be assessed and accounted for in the student's program design.

Another component of operational individualized instruction programs often stressed in the literature is the degree and type of student involvement in the management process. At one level the student must be frequently and periodically informed as to his progress (Scanlon, 1970) and such information must be geared to expectations and criteria clearly understood (and even mutually developed) by both student and instructor (Ullery, 1972). In addition, O'Donnel and Lavorini (1970) refer to the need for a variety of methods for student evaluation both of his own work and for feed back for the improvement of the system. While this type of ongoing exchange of data is clearly a component of the operational program, it is also related to the products of the system and to the problems of evaluation both of which will be discussed in greater detail later in this paper.

Finally, some writers assert that an individualized instruction program can often be assessed partially by means of the facilities provided and the ways in which space is utilized. (King, 1973, Kapfer and Kapfer, 1972, Kinghorn and Poden, 1970, Davis, 1972). Provision for a variety of activities within one

setting must be allowed to accommodate the options discussed above. Additionally many programs must provide for facilities which relate to a variety of extra-school experiences. Most notably these needs would occur in vocational-technical education and/or in other programs stressing field learning in the community.

While other programs may include variations on the themes presented above (most obviously in terms of the available instructional options) certain components of operational programs appear to be common enough to serve as the basis for categorization. Among these commonly observed elements are:

- behavioral objectives reflecting the program emphases in content, on student involvement and on "rate" and "prescription";
- a variety of options either selected by the student or prescribed by the teacher possibly reflecting the project's reinforcement system;
- differing emphasis on the role and nature of personal interactions;
- the role and operation of the management system relating to information and feedback; and
- the provision of facilities interacting with program/student goals and objectives.

Outcome Components

A discussion of the outcomes or products of individualized instruction is closely related to evaluation as the process of determining outcomes. The strength of the evaluation process is the index of the value of the products. This section is a brief summary of some of the kinds of products (program and student) which might be

expected from these types of instructional programs. The following chapter will include a discussion of evaluation processes.

Program Outcomes

The two major products of individualized instruction programs can be categorized as sytematic processes for providing such instruction and as specific content units and materials which may be useful within the subject area to be individualized. The former are more relevant to this paper.

Systems for the development of programs have been described previously (Henrich and Goldsmith, 1971; King, 1973; Ullery, 1971). Essentially these systems include procedures for identifying and analyzing the content to be individualized, objectives or performance goals with a variety of instructional approaches to assist in the achievement of the goals and suggested evaluative techniques. These may be usefully disseminated to other program developers or to persons interested in similar content areas.

Other projects produce more limited materials. Sometimes these are objectives, activities and/or instructional methods. Learning packages fall into this category. (Kapfer and Kapfer et. al., 1970; Hamilton and Jones, 1971; Scanlon, 1970).

Technologically oriented projects produce machinery and materials most often geared to self-instruction. Examples of these are the programs of computer assisted instruction, as CAI used in many Title I projects, Continuous Academic Progress-CAP (Herd, 1972) and AVISTA, an audio-visual instructional program, (Herd, 1972).

Estimating the value of any of these products must depend on considerations of the goals of the program for which they were used, student achievement of objectives and the extent to which considerations of student individual differences can or should be met. As has been observed, "pacing", or the "rate" at which a student progresses is only one of these considerations. Unfortunately, most of the literature describing products such as those listed above is deficient in evaluative information.

Student Outcomes

Student achievement in any program must be assessed in terms of the comprehensiveness of the diagnostic and prescriptive procedures occuring on entry and throughout the course of work.

Student assessment procedures vary from simply measuring change on a standardized achievement test (Clements, Duncan, and Taylor, 1969) to daily evaluations of progress, placement and activities (Scanlon, 1970; O'Donnel and Lavorini, 1970). Davis (1972) sees the frequency of student assessment and resulting changes in programming as one of the definitive aspects of individualized learning. Tosti and Harmon (1972) stress the significance of "maintenance management" which includes frequent review of what has been learned and retained, and also follow-up when a student leaves a program to better evaluate the program. Criterion referenced tests appear to be common measures of student outcomes, especially in programs based on learning packets. Ullery (1970) describes a program of criterion referenced testing for an individual vocational program where the standards are derived from the sequential tasks to be learned as the student progresses along the career ladder. Students in this program graduate with an "occupational readiness certificate".

Problems associated with the counseling and evaluation of students in individualized programs will be discussed in more detail later in this paper. For the purposes of defining these components of individualized instruction it is accurate to summarize as follows:

Program outcomes can be:

- systematic procedures for the development individualized instructional programs.
- individualized learning packages which vary in complexity.
- technological materials which are most often forms of paced self-instruction.

Student outcomes can be:

- individual development in areas reflecting individual needs.
- individual development in a common curriculum which can be measured as amount of learning which has occurred (i.e., achievement levels) or by the rate at which learning has occurred or some combination of these two.

Chapter III

SPECIAL ISSUES

There are many special topics which could be discussed at length in relation to individualized instruction. However, given the scope of this paper and its ultimate goal of suggesting criteria for assessing individualization programs, two of these issues appear to be most relevant--the counseling process and evaluation. Obviously these two are interrelated and also relate to factors described in the outcome section of the preceding chapter. Additionally, in closing the review of the literature with this chapter, a brief discussion of the criticisms of individualized instruction will be included.

The Role of Counseling in Individualized Instruction

It is not the function of this paper to define counseling procedures nor to elaborate on the needs of disadvantaged groups of people, yet both of these have implications for individualized instruction, especially as it is implemented within the two career education models which serve as a focus for this study. This is not to suggest that all participants in the models are disadvantaged but rather that these programs have a good potential for the education of such groups providing certain assumptions and goals are clarified. The fears that career education could simply be an extension of old procedures of "tracking" the disadvantaged into low status, low-paying positions were clearly expressed at the conference "Career Education: Implications for Minorities" held

in Washington early in 1973. Any program which serves disadvantaged people must be aware of the special needs and characteristics of these groups. Individualized instruction can be an appropriate vehicle for meeting their needs providing that assessment procedures are sensitive to them.

"Disadvantaged", for the purposes of this paper, refers to those persons who have limited access to employment opportunities with options to increase status, money and challenge. These disabling disadvantages may stem from sex or race as these are affected by limited educational opportunities and poverty.

The fact of economic disadvantage for women and minorities has been well-documented. Although specific figures vary, the trends are very clear. For example, Taylor (1970) reports that women comprise only one percent of the country's engineers and federal judges, three percent of lawyers, seven percent of doctors, nine percent of scientists and nineteen percent of college faculties. Career Education News, October 15, 1973 reports that while starting salaries for college graduates have gone up, with the biggest increases to women applicants, salaries offered to women still remain significantly lower than those to men with comparable jobs. A U.S. Office of Education study has shown that women on college and university faculties are paid, on the average, $2,500 less a year than their male counterparts. Also, only 1.4 percent of high school principals and 19.6 percent of elementary school principals are women -- despite the large number of women teachers. (Mpls. Star and Tribune, October 25, 1973).

The same types of patterns hold true for ethnic and racial minority groups. James Harvey (1972), in a study of minorities and advanced degrees reports the following: within the total number of graduate and professional students, only 39,869 or 7.3% are minority group members. Also, U.S. Department of Labor figures show that for our largest minority, blacks, unemployment when related to the growing size of the work force increased dramatically. Specifically, the number of unemployed black people increased by 22 percent between 1970 and 1971. The pattern holds true for other minorities as well. For example, 53 percent of all Puerto Rican students drop out of school by the time they reach tenth grade in academic schools and only 46 percent of those remaining enroll in college bound programs. (Valez, 1973)

The compilation of similar statistics for all disadvantaged groups could fill volumes and are the subject of much study. These sample figures are not intended to be definitive descriptors of the status of disadvantaged groups, but rather to illustrate an observable trend.

The significant questions regarding these groups here are, in what ways do such persons differ from more advantaged groups, and how can an individualized instruction accommodate such differences in ways which will result in increasing the educational and economic options of these groups?

Karnes, et. al. (1971) summarize a review of the literature as revealing at least six areas in which the disadvantaged differ from the middle class: self concept, motivation, social behavior, language, intellectual functioning and physical fitness. Obviously, when dealing with generalities, it must be remembered that stereotypic lists rarely apply in toto to any individual or even to all groups. In this instance, if the assumption that women fit the general definition of economic disadvantage, only certain of the Karnes' descriptors apply. Nevertheless, if studies are accurate, many of these descriptors do seem to be characteristics of disadvantaged groups.

One area of study with direct implications for individualized instruction in career education has to do with motivation and the aspirations of the disadvantaged.

Brookover and Patterson (1962) found that self-report measures of a student's concept of self are just as potent in predicting school achievement as measures of academic aptitude. Edwards and Webster (1963) identified positive self-concept as leading to higher aspirations and greater academic achievement. Yet Wylie (1968) reported that Negro and lower-class children tend to underestimate their ability to achieve.

Hindelang, (1970) discussed his study of educational and occupational aspiration among working class, Negro, Mexican-American and white elementary school children. He found that Negro children had the highest educational aspirations followed by whites, then Mexican-Americans. But holding educational aspirations constant

white and Mexican-Americans were found to aspire to higher occupational positions. Hindelang suggested that this pattern is not atypical in that Negro youngsters may well view themselves as needing more education for lower jobs.

These reports corroborate a wide variety of less objective observations on behalf of practicing clinicians and teachers. Much of the apparent failure of disadvantaged youth apparently derives directly from self-perceptions and control expectancy. (Coleman, et. al., 1966).

Yet, in spite of these observed differences in self-concept, attitude and motivation, differences in ability have not been convincingly documented. Writers (Mink, 1961; Gordon, 1965; Hunt, 1961) reviewing relevant research and theory established several creditable conclusions about the effects of deprivation on subsequent performance. These writers suggest:

- There is little creditable evidence to suggest that racial differences in intelligence exist.*
- Disadvantaged youth raised in middle-class homes display measured intelligence significantly higher than their biological parents.
- Early deprivation can effect a decrement on a person's future academic or intellectual performance.
- Remedy of effects of deprivation is at least partially possible, sometimes dramatically so.

* This issue is debatable. For further discussion the reader is referred to: Harvard Educational Review, 1969, Reprint Series No. 2.

Cultural deprivation or variation may adversely affect response modes, perceptual styles, intellectual functions such as language development, cognition, speech, comprehension and vocabulary, all necessary in the middle class classroom. Yet most authorities believe, as Schwebel (1965) that "... the socially deprived have the capacity to develop the cerebral functions necessary for advanced learning. Whenever our society shall want high-level universal education, it can have it."

Mink (1970) synthesizes findings similar to those presented above in a way clearly related to individualized instruction. "Recognizing that these youth lack the experiential background for learning, reading, and verbal expression in currently applied communication modes and information displays, educators wishing to help the disadvantaged overcome educational defects must be willing to restructure information displays and vary communication techniques. Maybe the classroom as we knew it is obsolete as a setting to meet the educational needs of all youth."

The foregoing paragraphs only touch on the special needs and characteristics of disadvantaged groups. Yet it is clear that special characteristics do exist and must be met in the educational program. If individualized instruction does include the mechanisms for careful assessment of individual needs, the evidence presented suggests that, in the assessment of disadvantaged persons, special attention must be placed on considerations of attitude, self-concept, motivation and aspiration. Resulting prescriptions must reflect these special needs. There may also be a need for additional support services, such as special counseling.

Assuming that individualized instruction has a special need for counseling, whether by teachers, teams, or certified counseling personnel, it is appropriate to describe at this point some possible counseling approaches relevant to individualized instruction, bearing in mind special needs such as those described above.

A number of writers suggest the kinds of problems which should be addressed in the counseling situation. Martin and Martin (1971) say that the curricula must be upgraded for girls at all levels, and that girls must be encouraged to participate in a wider range of skill training programs. Guidance should consider two part planning for women, before and after child rearing. Koontz (1973) warns that with women soon to comprise 40 percent of the labor force, they must be counseled away from traditional dead-end jobs. Hedges (1971) predicts that unless such counseling occurs, there will be increasing competition for jobs, and rising unemployment with the possibility of depressed wage rates. Beyond specific job-oriented guidance, writers in the area of counseling the disadvantage emphasize the importance of communicating realistic expectations in terms of jobs, but especially positive expectations related to the individual's self-concept, achievement, self-worth and control. (Peterson, 1967, Vontress, 1967, Ryan, 1969.) All of these seem to be valuable constructs for counseling in individualized instruction, but it is not always clear just when and how counseling intervention should take place.

Based on evidence suggesting the importance of peer groups, and suspicion of conventional authority among the disadvantaged, indeed among most adolescents, Mink (1970) makes a case for peer-group processes. Hamilton and Jones (1971) describe a prototype program

which emphasizes individualization within counseling where the student is assisted in formulating relevant goals, based on an understanding of his own interests and needs together with an analysis of a variety of opportunities. Student decision-making is also the focus of a computerized guidance system developed by Educational Testing Service (SIGI), (Katz, 1970) in which a student systematically explores his interests, values, and the capacity of society to meet those needs. This results in a predictive list of priorities which serve as the basis for a planning system with simulated outcomes and problems.

Merrill and Forrest (1970) describe a model for career development counseling with four "dimensions", or levels of intervention. The first of these is counseling for a specific decision by providing information and clarification of issues. This approach is most common and useful for short term crisis counseling, but is frequently of limited value, especially when working with students with special needs, such as the disadvantaged. The second type is also counseling for a specific decision, but the focus is on developing the client's decision-making skills. The advantage to this approach is that it can alleviate the current crisis but can also supply decision-making tools for future use. The third type views career choice as a process and emphasizes the process of making a series of choices. While similar to the second approach, this method has advantages in that it can accommodate changes in the individual as well as in the situation. The fourth approach is called "career process counseling" with an emphasis on the individual's ability to determine his own objectives and to influence his options rather

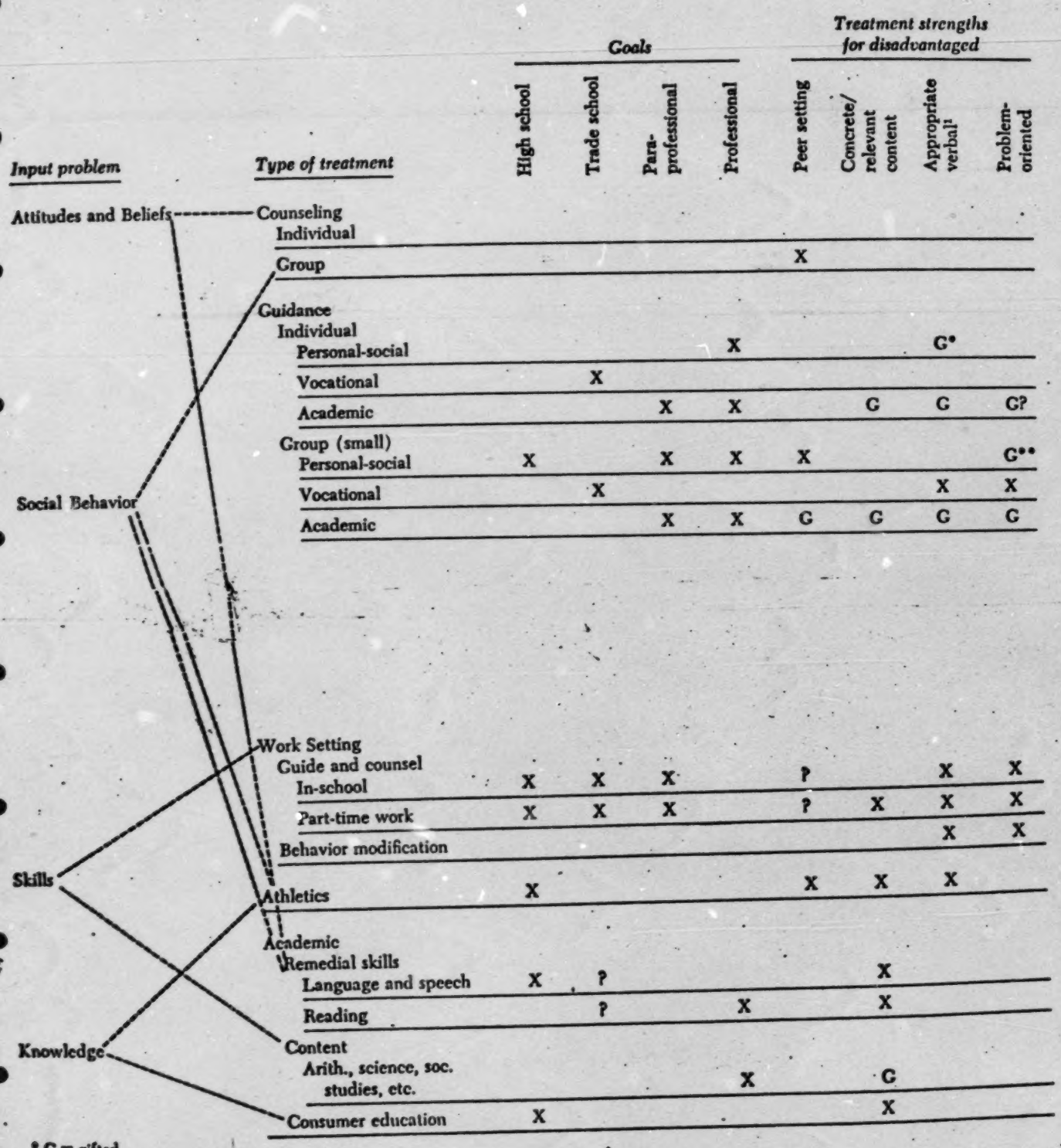
than just adapt to external pressures. This model has been described at some length in that it may be one approach to counseling within individualized instruction programs making allowances for special needs ranging from the single point intervention required for a generally autonomous client to a means of providing clients, such as the disadvantaged, with insights and attitudes which may assist him in influencing his own future.

One other counseling approach will be described in some detail because it was developed to focus on the needs of the disadvantaged (although there appears to be no reason why it could not also be applied to other groups) and because it reflects a need for differential options. This model was developed by Karnes, Zehrbach and Jones (1971). It rests on the assumption of individual differences (intellectually ranging from slow to gifted) and recognition of how available options differ in orientation and focus: non-verbal versus verbal, person versus work orientation, group versus individual orientation.

Figure 1 has been included as a graphic summary of the program ideas based on limited available research findings, the characteristics of each program and an analysis of client needs. The model could be useful in focusing attention of school personnel on the interaction between the needs of youth and the treatment available. For example, one of the needs of the disadvantaged is to be placed in programs that will change their attitudes and beliefs. Individual counseling has frequently been viewed as the appropriate treatment. However, many of the attitudes of the disadvantaged are derived from their peer group. Therefore it is logical for the

FIGURE 1

Comparison of Needs and Goals of Disadvantaged with Characteristics of Programs



* C = gifted
** Except gifted
[1] Verbal content should be low for most disadvantaged except when preparing youth for professional positions.

counselor to work within a peer group. Further, since disadvantaged youth are often not introspective, the content of the individual counseling method --insight and self-awareness --is not relevant Neither are the abstract concepts nor the unfamiliar vocabulary of counseling particularly suitable. Since the disadvantaged may not feel the immediacy of the problem, the treatment lacks relevancy.

A similar analysis was conducted on the remainder of the typical settings. An "X" suggests that in general the treatment offers above-average potential while a "G" suggests that the treatment may be above average for the potentially disadvantaged gifted pupil. Occasionally interactions between the needs of the disadvantaged, the type of program, and the academic goals of the individual may tend to reverse the meaning of a mark. Also, caution must be observed when using the chart, since local conditions or specific conditions may negate components of the chart. For example, the presence of an outstanding, low verbal counselor who has "simpatico" with the disadvantaged might easily outweigh many of the other considerations. It is presented here as one of very few suggestions for individualizing counseling and guidance options.

The preceding pages have attempted to outline just a few of the considerations involved with the counseling component of individualized instruction programs, especially as they may relate to the needs of the disadvantaged. The following observations have been made:

- A significant proportion of the population has been economically and educationally deprived often because of factors relating to sex, race or ethnic status and/or socio-economic standing.

- Beyond the variables listed above, there is little evidence to suggest any differences in ability although other socio-cultural differences do seem to exist as a result of the primary conditions.
- Programs of individual instruction may be an important variable in improving the status of the deprived as well as improving the education of advantaged clients.
- The role of the counselor is significant in effecting such a change. Counseling and guidance should systematically individualize diagnosis and treatment of clients.

Evaluation of Individualized Instruction Programs

Literature dealing with the evaluation of individualized instruction is limited in quantity and quality. Articles tend to be either too general or too specific. No comprehensive methodology appears to have been conceptualized or implemented.

Reinhart (1971) discusses the types of information needed by the National Advisory Council of Vocational Education, many of which apply to the individualized models of career education. These are: information with greater scope, for example the effects of treatment on groups of people such as women, young children and the disadvantaged. Secondly, monitoring information on the achievement of national vocational goals is needed, especially the goal dealing with universal availability. Also, information on attracting the potential clientele and on different hiring practices of local employers is needed. Moss (1971) reiterates many of these needs, but suggests that data must also be available on the potential manpower market, and

that this data must be related to information about the potential student body by age, sex, needs, and so forth.

Moss and others (Welman, 1971; Voelkner, 1971; Thompson, 1973) attempt to translate these information needs into evaluation plans which tend to be comprised of a series of generalities about the importance of conducting a needs assessment, developing objectives, "formative" monitoring of implementation and operations, and "summative" evaluation of results. It was not possible to decipher how these approaches are especially suited to either vocational/career education or to individualized instruction.

Those writers who deal with the evaluation of individualized instruction seem to focus on the problem of finding a measure of student achievement. Packard, (1972) concludes that the only real measure of achievement should be rate, that is, the time required for mastery. Wang and Yaeger (1971) support this conclusion, but add that the degree of mastery must also be considered. Conflicting opinions about the arbitrary nature of "degrees" of mastery (e.g., 85% mastery) lead to questions about both rate and mastery as measures (Tillman, 1971; Tucker, 1973). Implicit in these discussions of rate and mastery is the notion that individualization is a program of teacher-designed curricula through which all students progress (albeit with possibly different activities) and where the major difference is rate.

Both evaluators of individualized programs and writers concerned with the evaluation of programs for the disadvantaged tend to decry the use of standardized achievement tests. Whitely (1967) identifies three principal difficulties with standardized tests when used with disadvantaged minority groups.

- They may not provide reliable differentiation in the range of the minority group's scores.
- Their predictive validity for minority groups may be quite different from that for the standardization and validation groups.
- The validity of their interpretation is strongly dependent upon an adequate understanding of the social and cultural background of the group in question.

Clement, et. al. (1969) say that nonstandardized methods of evaluation are often of greater importance than standardized methods because they allow the counselor to ascertain the functional capabilities of the deprived counselee more accurately than would be possible with standardized measures.

Since the topic of this paper is individualized instruction rather than minority group or vocational educational evaluation, the former have been presented only as illustrations of the range of concerns generally related to the assessment of individualization within career education models. The problems are evident, solutions are not. The review of the literature revealed the following difficulties:

- There is no conceptual model available which distinguishes between program evaluation and student evaluation.
- Program evaluation approaches are so general they provide evaluation guidelines of limited value.
- Student evaluation procedures are so narrowly defined they ignore most of the potential components of individualized instruction outlined in Chapter II.
- Sensitivity to issues relating to minorities and other dis-

advantaged groups is so great as to nearly cripple attempts at objective evaluation.

- Appropriate decision-making audiences are rarely defined.

Criticisms of Individualized Instructional Program

While the theory of meeting the different education needs of every student in the ways most efficacious for him is so commonly accepted as to be nearly bromidic, specific approaches to individualization are not viewed in so sanguine a manner. A review of the literature leading to a conceptual model would be incomplete without some discussion of criticism. These criticisms should be considered in the assessment of programs but should not be viewed as a kind of negative definition of individualization.

First, many writers are concerned that programs of individualized instruction are too technologically oriented and consequently ignore the significance of interpersonal relationships (Tucker, 1973; Duda, 1970; Tillman, 1972; Nichols, 1972). These writers observe that the development of social skills and cooperation are important educational goals, that attainment of such goals should be facilitated by peer group interaction and by an observant "child-centered" teacher as opposed to a methodology/measurement centered teacher. Interactions must leave room for disagreement and questioning as well as for positive reinforcement.

A second area of concern has to do with what is viewed as too much focus on "pacing", "rate" and "sequence". Tillman (1972) concludes that sequence is in the individual's head and prestructures are limiting and often inappropriate. Duda's conclusions that

content must facilitate the student's need to increase his own knowledge and to develop his own synthesis of learning tends to support this (1970). Henderson (1972) observes that individualization should be, and often is not, more than self-study. Tucker (1973) says that individualization is more often than not just pacing.

Many of these same writers are also concerned that students have a choice about their own education, in selection of goals and objectives, of learning activities and of evaluation procedures and criteria (Tillman, 1972; Duda, 1970; Nichols, 1972).

One last general concern has to do with evaluation techniques in terms of the selection of arbitrary and unrelated criteria, and the lack of face or content validity in measures of achievement. (Tillman, 1972; Whitely, 1967; Clements, et. al., 1969).

CHAPTER IV

DEFINING AND ASSESSING PROGRAMS OF INDIVIDUALIZED INSTRUCTION AND THE RELATIONSHIP OF SUCH PROGRAMS TO THE CONCEPT OF TRACKING

Based on the review of literature it is clear that a very large number of considerations are present in defining individualized instruction especially as it exists in programs which serve disadvantaged clients. However, if the definition is to be the construct upon which assessment procedures can be built, the definition should be as parsimonious as possible. The purpose of this chapter is to suggest one definition, to elaborate upon it in terms of program components, and to discuss the relationship between individualized instruction as it has been elaborated in this paper and some aspects of educational "tracking."

Definition

> A program of individualized instruction is a systematic procedure for determining, on an ongoing basis, client needs, interests and aspirations, and for providing options to the client which will optimize growth in each and all of these three areas.

Discussion of terms

Systematic procedure - This term suggests that a program of individualized instruction is a specific plan, either fully or partially operational based on an enunciated rationale, internally cohesive, with established provisions for individualized diagnosis, counseling, activities and evaluation. Plans will include objectives at many levels of specificity relating to logically determined criteria and to measures of achievement by which progress may be gauged.

Determining - refers to the assessment process. This process can be analyzed in terms of the content which is assessed, maximally those individually different characteristics listed by Kapfer and Kapfer (see page 9) and in terms of the procedures used. These may vary from single standardized achievement measures to multi-trait, multi-method procedures assessing the client more than one way on each of the identified characteristics which the program can impact.

Ongoing - relates to the frequency of assessment. Ideally, as with Rousseau's Emile, each student could have a tutor constantly sensitive to his growth and variability. Obviously this ideal is impractical. However, given that individuals change and do so in an idiosyncratic pattern, the program of individualized instruction must have a system for regularly determining student progress. While it may be assumed that frequent assessment leads to frequent intervention, this is not necessarily so. Sensitive assessments should also determine when the status quo should be maintained. The program should have a rationale for the timing of the assessments.

Needs, interests and aspirations - implicit in this phrase is the suggestion that a program of individualized instruction should be built upon individual choices (interests) but must also address needs, for example, basic skills. While the point has been made that a most liberally constructed program could accommodate non-participation as a choice, the position adopted here is that certain skills, most notably reading and mathematics, are so basic to successful living and to optimizing career choices, that a program may have to insist on student achievement in these areas. Aspirations are also significant facets of personality assessment. When aspirations are clearly discordant with

aptitudes, either too high, or, as in the case of many disadvantaged persons, too low, it is the function of a program of individualized instruction to assist the individual in relating his aspirations and aptitudes more closely.

Providing options - this phrase is that most often equated with individualized instruction. Hopefully it has been demonstrated throughout this paper that a program of individualized instruction is considerably more complex than just the provision of options. However, alternative choices are probably the most significant factor in the operational program. It must be noted that options should be available in assessment procedures, in the three areas of needs, interests and aspirations, in counseling procedures and in evaluation techniques. Both the number and variety of choices in each of these categories should be assessed.

Optimize growth - this phrase is clearly related to the three areas of needs, interests and aspirations. The program should assist each student in achieving maximal academic objectives, in expanding interests and exploring a variety of them, and in selecting personal goals which will provide the individual with maximal opportunities when he exits from the program.

Tracking and individualized instruction

Presumably if all of the foregoing issues were considered, developed into program components and implemented, a system of individualized instruction would exist which could take an individual from any kind of background, optimize his emotional and mental health, precisely define his interests and abilities, clarify all educational, personal

and occupational opportunities available to him for the rest of his life and train him by means most suited to him to capitalize upon those opportunities. This would seem to be an unrealistic expectation. However, some observers have expectations of programs of individualized instruction, particularly in career education, which are not significantly different from the optimistic picture painted above.

Many of the critics of career education represent disadvantaged groups in society who are rightfully claiming equal opportunities to participate in the majority culture's largesse, including not only economic advantages but the right to personal fulfillment. Many women, for example, protest their relegation to less interesting and rewarding careers. Minority groups and the poor protest a system which has historically treated them as second class citizens. In the opinion of such groups, education has been an important vehicle for the promotion of the middle class white male and they are demanding not only equal access to this vehicle, but a privileged access which may help to compensate for deficiencies generated by years of deprivation. In this context, "education" is many times considered synonymous with "college education."

However, as our complex society continues to evolve, it has become apparent that a traditional college education is not the catalyst to success it may have been in years past. In response to the need for a variety of occupations to meet the demands of an industrialized society, leading educators have promoted the concept of career education. Simplistically, career education is an attempt to define and communicate to students the vast number of occupational choices available, the rewards and disadvantages of the options, the quality of life

associated with the choices and the prerequisites necessary to avail oneself of the careers. A college education is clearly necessary for some alternatives, but most certainly not for all. Individuals unaware of the broad goals of career education tend to associate it with traditional vocational education. That is, skill training in a limited number of relatively less prestigious occupations. This, they claim, has always been the pattern for disadvantaged people, hence the charge that career education is simply a new title for "tracking" the deprived into flexible, limited occupations.

It is relevant to consider at this time what the term "tracking" infers. In its most negative context it is commonly used to refer to a process whereby individuals and groups are guided and/or trained educationally and economically under less than optimal circumstances with the result being limited opportunities for maximizing life styles. Worse, it suggests that those individuals and groups so treated are defined on the basis of irrelevant characteristics such as sex, minority racial or ethnic backgrounds and low socioeconomic status. The image which comes to mind is that of a railroad track, straight, narrow and inviolable, stretching over vast distances of terrain. Certainly this situation is deplorable and has occurred all too commonly over the years.

Presumably it is a simple matter to recognize such abuses of human dignity and rights. Programs which systematically produce students trained in several levels of professions and in which the lower categories or most stereotypic categories are repeatedly filled by persons of disadvantaged status would most probably be accused of tracking in the negative sense discussed above.

However, the issue is considerably more complex than the preceding paragraphs may suggest.

In the first place, accusations which refer to "tracking" should be carefully defined. One might make the case that individualized instruction with all of its positive techniques and results as discussed throughout this paper is the ultimate tracking system — placing every individual on the optimal track for him. Appropriate tracking is a desirable goal. The more positive image may be that of a railroad switch yard where trains are systematically routed and rerouted onto a variety of clearly defined tracks.

Secondly, "irrelevant" characteristics are not easily defined. Certainly race, sex and socioeconomic status per se would appear to be irrelevant. But these variables are very much confounded. For example, race and/or ethnic background are characteristics of which persons in minority cultures are becoming increasingly proud. The values of these cultures are gaining respect. Persons espousing such values are finding a rightful identity in them. Many times these values are at variance with the success, aggression-oriented, values typically ascribed to the majority. The impact of such values on the choices of persons in individualized instructional programs must be considered before the program can be accurately evaluated.

Sex is another such confounded variable. While men and women should rightfully expect equal opportunity in making choices of life styles, it must also be recognized that men and women today are products of a long history of sex-typed rearing. Masculinity and feminity are not simple sociological traits to be manipulated.

They are basic personality characteristics. Additionally, there is little consensus within the anti-sexism movement as to what the optimum situation would be. The amount of exposure to these "new" kinds of attitudes, and an individual's reactions to them, must be weighed before programs can be evaluated as "tracking" on the basis of sex. Finally, in programs for adults, the presence and age of children and the attitudes of both marriage partners toward careers must be considered.

Socioeconomic status is also a sensitive and difficult variable to evaluate. Levels of aspiration may be positively or negatively associated with one's experiences. Also, given the information from studies presented in Chapter III, socioeconomic status does have an impact on ability and aptitude. Unfortunate as this may be, by the time deprived youngsters become adolescents and adults the influence educational programs can have may be somewhat limited. In this connection, the position taken here is that abilities and aptitudes are <u>not</u> "irrelevant" variables. This is not to say, however, that special attention is unwarranted in the assessment process. The dangers of standardized tests have been noted. These instruments are certainly not useless, but with clients having the characteristics discussed in this section, it seems clear that these should not be the only assessment procedures used.

The problems of breaking the depressing cycles of the disadvantaged are enormous. As a third point, the rights and the capabilities of educational programs to intervene in the lives of individuals

must be considered. If one of the goals of individualized instruction is to respect the choices and decisions of individuals, then certainly individual choices regarding priorities in terms of families and values must be paramount. On the other hand, programs must be held accountable for assuring that participants are completely aware of the options available to them and for establishing with clients criteria by which decisions may be made.

The capability of the program is also a limiting factor. With realistic temporal and financial restraints no program can be expected to be all things to all people. It is the responsibility of the program, however,to apprise all clients, prior to entry, as to the benefits and potential limitations of participation. In this regard it is also appropriate to note the limited capacity of any short term intervention to change values and conditions which have been paramount throughout the life of the participant. The question as to whether the program has the right to insist on such changes has been addressed. The point here is that it would seem to be unrealistic to expect a short-term program to be able to produce major sociocultural changes.

This section of the paper is not intended to rationalize the negative abuses of tracking defined at the outset. Rather it is intended as an exposition of a few of the complex issues which must be considered in a sensitive evaluation of program effects. This is neither a detailed nor comprehensive discussion of any one of the problems which must be dealt with. Hopefully it will direct the reader's attention to the fact that individualized instruction and tracking are complicated concepts with implications for both implementation and evaluation.

Summary

To summarize: tracking, in the negative sense, is a process whereby a program of social intervention fails to maximize the educational and economic opportunities of its participants either by errors of omission or commission. Some observable clues in determining the extent to which a program is tracking may be the following:

1. Programs providing education for several levels of the occupational hierarchy regularly train women, minority groups and the disadvantaged for the lower levels of the hierarchy and rarely for the higher levels.

2. Programs with limited assessment procedures for determining individual characteristics, e.g., using standardized tests as the sole measure of individual status.

3. Programs with limited or no counseling processes, or with counseling which reinforces limited perceptions of options held by participants.

4. Programs with no established processes for accommodating culturally different values.

5. Programs with limited counseling prior to client entry to determine program fit with client needs.

6. Programs which focus on the needs of society (e.g., current manpower shortages) to the exclusion of individual needs.

The foregoing definition of individualized instruction as refined in the discussion of terms and the considerations relating to tracking serve as the basis for suggested program assessment procedures. An optimal program assessment should be able to provide qualitative as

well as quantitative descriptive information about the program. However, given the scope of the present study, only the latter was attempted. The procedure was a matter of determining whether elements of either individualization or tracking were in evidence.

The specific methodology employed in the assessment of three career education projects and the results of the assessment are the topics of the final chapters of this paper.

CHAPTER V

AN APPLICATION OF THE CONCEPTUAL MODEL TO THREE CAREER EDUCATION PROJECTS

Following the development of a conceptual framework, the researchers reviewed operational plans, reports and other documents produced by two Experience Based Career Education (EBCE) projects and the rural residential model. These projects were located in Philadelphia (Research for Better Schools, RBS), Charleston, West Virginia (Appalachia Educational Laboratory, (AEL), and Glasgow, Montana (Mountain Plains Education and Economic Development Program, MP). Based on the document review, key areas of inquiry were determined and an interview plan for site visits and observations was approved by the appropriate NIE project officer. Visits to each of the three sites were scheduled and took place between November 15, 1973 and January 31, 1974.

Prior to or at the time of the site visits, ARIES conceptual model and definitions of individualized instruction and tracking were made available to and discussed with each project staff. A number of modifications and clarifications resulted from the incisive comments and suggestions made by them.

Using the interview outlines and questions as a general guide at each site, the researchers attempted to identify those project components essential to an individualized program, at the same time noting clues or characteristics of tracking that were present.

The remainder of this chapter has two major parts: the first is a discussion of the individualized instructional practices of the

projects observed and the second is a brief examination of a series of questions related to tracking. Individualized instructional practices were assessed primarily on a quantitative rather than qualitative basis. The key question usually related to whether or not a component, system, or procedure was present or available, rather than the degree to which it was successful. In some instances, however, the presence or absence of a component is itself a matter of degree and thus, some judgments intended to be quantitative may appear more qualitative in nature.

Tracking as a measurable process or characteristic of a program was considerably more elusive. At the outset, the researchers regarded the term in a pejorative sense as standing at the opposite end of a continuum of individualization. Subsequent consideration made it clear that tracking and individualization were not bi-polar ends of the same continuum. We noted variations of tracking and circumstances that warranted or displayed tracking in a constructive, rather than a destructive or deprecatory manner.

Tracking was also difficult to observe because often it is the result of long established processes of selection, placement, and training that may not be evident unless a more longitudinal review of a project were made.

Methods for Collecting Assessment Information

The underlying assumption of the assessment procedures was that more accurate data could be collected if multiple sources were used within categories defined by the conceptual model. Sources included

program participants, program staff and administration, program plans and documents and individual student records. These sources were utilized through group and individual interviews, participant observation, and review of documentation and records.

Interviews were conducted on site with the project administration, counselors and teachers, and groups of students. Relevant aspects of the assessment were adapted into an interview form with as much overlap (as pos[illegible]) of questions for the different groups.

A checklist was developed for review of project documents. The content reflected the conceptual model.

A sample of student records were examined. To the extent possible the records were reviewed to include information on student differences in sex and socioeconomic standing.

Additionally, some student group activities were observed, for example, group counseling.

Background Information Relating to the Three Projects

Prior to discussing the results of the site visits, each project will be discussed with a focus on those activities the project was engaged in at the time of the visit.

RBS

Like other EBCE programs funded by NIE, the RBS program was in its second year of serving students. Focus for the EBCE programs during the second operational year was on stabilization of delivery systems, evaluation of processes and products, and documentation to ensure replicability. Each project was presumably approaching a stable

pattern of operation, yet in both EBCE projects visited in the course of this study, a stable C.E. delivery system had not been realized. So long as project personnel see weaknesses or a need for change in what they are doing, "stabilization" will probably remain a rather fluid concept. This seemed especially pertinent to the EBCE project at RBS where rather significant operational changes occurred between the first and second years. These alterations in operational strategy will be referenced several times throughout this report, since they have important bearing on the counseling and instructional practices about which we had a special concern.

The operational changes in the second year led to an important differentiation in the student of the EBCE program. All 70 twelfth graders had been in the program since it began in September, 1972. Some graduated in March, 1974, most in June. These students were the full responsibility of RBS's Academy for Career Education, a private school without ties to the public school system of Philadelphia. The students had no direct or formal affiliation with their previous schools. Thus, for this half of the student body all services and all instruction necessary for a high school diploma were provided within the EBCE PROGRAM.

The 64 tenth and eleventh grade students new to the Academy in September, 1973, were not the exclusive enrollees of the Academy for Career Education. They had all come from Olney High School in Philadelphia and remained on the rolls of that school. Generally they attended Olney four days per week for two hours taking elective classes. Then they came to the Academy for several hours receiving

basic or supplemental instruction and guidance class, a regular instructional program aimed at providing information about the world of work, the skills needed in various jobs, and techniques for applying and getting a job. (Twelfth graders also took the guidance class.) One day of each week students were engaged in career exploration and on that day the Olney students did not attend classes at their high school. State aid, based on average daily attendance (ADA), continued to be received by the Philadelphia schools since the students from Olney remained on their enrollment, could return there if they left the EBCE program, and were expected to receive their diplomas through Olney High.

It was anticipated that after the present twelfth graders left the Academy, incoming students would continue an affiliation with the Philadelphia schools at which they received most elective subjects. The Academy would continue to provide career exploration and specialization programs, and to offer basic skills instruction. The public schools should continue to receive ADA for students in the Career Education program. It was hoped that the public schools would move closer to direct support and eventual sponsorship of an EBCE program.

The ARIES site visit to RBS occurred on January 29, 30, 31, 1974. During the site visit the team had access to the full range of data accumulated by the project's evaluator and were able to interview those persons in the developmental and operational components of the project who were identified as most responsible for the design and execution of the EBCE project. In addition, the team interviewed students at the Learning Center and were impressed by their responsive-

ness and their ability and willingness to articulate their perceptions of the program. As in any study based on observations, interviews, and accumulation of only a portion of the total data available, the observations presented here only represent a sampling of the project's activities.

AEL

The AEL program was also in its second year of serving students. Focus for the year was on stabilization of delivery systems, evaluation of both process and product, and documentation to ensure replicability. The principal ARIES interest for purposes of the present investigation was on delivery systems - the potential for providing instruction that was individualized to meet students' needs, desires, and abilities and the capacity to offer more than a narrow band of career exploration options.

The ARIES site visit to AEL occurred on January 15, 16, and 17, 1974. AEL was formally at the end of a period of development and entering a product stabilization phase in which its instructional products and procedures should be more fully defined. During the visit, it was possible to observe initial activities to familiarize and train staff in the use of new materials and in application of a strategy for student program development and maintenance. Unfortunately, some observations and interviews will present a view of practices and procedures to the time of the visit and will not reflect any experiences of the project with the new products it was introducing in the stabilization phase.

Mountain Plains

Mountain Plains was the only project which was "residential" in nature. Participants in the program usually relocated their families to the Mountain Plains facility, approximately 20 miles northeast of Glasgow, for the duration of their career exploration and occupational preparation training.

The program was geared to provide career exploration and occupational training in any of five career areas: office education, food services, lodging services, mobility and transportation occupations, and construction and building trades occupations. (At the time of the site visit a sixth area, education and social services was being phased out, and work was being initiated to develop a "new" sixth occupational area of marketing and distribution).

Responsible for the education and training of the students in these various areas was the Occupational Preparation Section, the largest of the staffed divisions. Staff in this division served as teachers, instructors, coordinators, guides and learning managers.

Participants were not only offered exploration and training in an area, but at a certain level within that area. For example, the office education program was broken down into three sub-areas and nine classified positions. They were:

A. Clerical
    1. file clerk
    2. receptionist
    3. typist clerk
    4. stenographer
    5. secretary

B. Accounting

(1) accountant clerk

(2) cashier

(3) bookkeeper

C. Electronic Computer

(1) key punch

Each position had its own curriculum in which students were expected to use LAP's - learning activities packages - on an individual basis at their own speed.

Each of the above positions had curricula established internally based on educational requirements reflecting the attitudes and needs of unions, employers or professional organizations. To assist the students in meeting whatever educational requirements had been established, a Foundation Education section was responsible for the basic skills training. With heavy emphasis on the LAP's, participants were assisted in trying to reach grade levels in reading and/or math that had been established for certain job positions. Through recurrent testing and reviews, the student was moved through the program until he/she reached a basic skills objective.

A third section, Career Guidance, was responsible for the actual career exploration, and career development of the participants. Subdivided into three areas, occupational guidance, work experience and career development, this section provided the instruction and counseling to assist the student in exploring career opportunities, selecting a career, getting experience in that career, developing himself to be more marketable for a career and preparing for exit

from the program. It was through Career Guidance that a six-week periodic review of the participant's progress was executed.

A fourth support section was that of Counseling. The counseling staff was available (from orientation to exit) to assist the participants in dealing with any problems considered non-academic. Through counseling, students had access to group counseling sessions (provided as a part of the Core Curriculum) or could seek individualized counseling when a need was indicated.

Other support services available to the student were through the Health Division and the Home Management and Consumer Education sections. During the first five weeks of orientation, all students took part in a "family core curriculum" which included courses in health habits and interpersonal and social skills. The staff of each section maintained an ongoing contact with participants and their families during the program.

In addition to the support services division, a division for Research and Evaluation was assessing the program and student development within that program and collecting data upon which program objectives could be assessed as an aid in program planning.

At the time of the site visit students stayed in the program an average of 9.7 months at an average cost of $14,700 for each participant family. The project's aim was to lower the average length of residence to 8½ months and the per family cost to $11,500.

During the site visit, meetings and interviews were held with the major administrators and staff of the various divisions. In addition, a review of the available program and student data was executed.

Interviews with participant representatives provided additional information. At the time of the site visit, the program staff was in the process of readjustment as some staff, relatively new to the project, were involved in program curricular changes. In an effort to maximize program efficiency, the areas of curriculum development and career guidance were being revamped.

Results of the Assessment

This section of this paper reports the results of the ARIES effort to assess the individualization aspects of the three Career Education projects in terms of the definition presented in Chapter IV and to provide some insight as to the functioning of these projects in relation to the concept of tracking also discussed in Chapter IV. The discussion is organized around the several elements of the individualization definition and around questions related to tracking. The efforts of the three projects relative to each element will be presented in the following order: RBS, AEL and Mountain Plains.

The elements of the definition are: systematic procedure; determining; ongoing; needs, interests and aspirations; provide options; and optimize growth.

1. Systematic Procedure

This term, as well as the others, was defined in the preceding chapter. Briefly, it suggests that a program of individualized instruction must have a specific plan, based on an enunciated rationale, internally cohesive, with provisions for diagnosis, counseling treatment and evaluation. The following paragraphs will describe the "systematic procedures" for each of the three Career Education sites visited.

RBS

Given that this experience based program was still in developmental phases (as all of the career education programs were) it would be unrealistic to expect any procedures to be in final form. In fact, to do so prematurely would be extremely unwise. Therefore this section will

describe those procedures in use at the time of the visit.

In the area of diagnosis, the primary way in which systematic procedures were employed was in determining student academic needs.

The basic academic program offered by the project was ILA (Individualized Learning for Adults). This program included extensive diagnosis of student needs in the subjects of reading and math. Sequenced entrance tests provided a way to determine the level at which a student was working within each skill area. Students' work in the Learning Center was prescribed on the basis of this diagnosis through assignment of specific activity sheets. Each student received individually prescribed work tailored to his/her needs.

There was also systematic provision for entering students who did not need the ILA program but still required instruction in courses that would advance them toward the high school diploma. These students participated in the Supplementary Education program (although it was optional). The diagnostic system in this instance was based primarily on student needs and interests. Two factors affected the diagnostic process: student needs for high school graduation and the range of options available. For each student this pattern was worked out individually according to needs, but neither the course activities nor the bases for entry appeared as systematic as was noted in the Basic Skills area.

A systematic procedure for counseling was being developed. Counseling was not completely individualized in that all students were required to participate, but the activities proposed for counseling were geared toward meeting individualized needs much in the manner of the third

approach described by Merrill and Forest (1970) described in Chapter III of this paper.

The principal purposes of the counseling activities were listed as:

a. Assisting students in problem solving and career decision making.
b. Disseminating information.
c. Helping students do needs research regarding the world of work and determining personal requirements for entry into careers of their choice.
d. Formulating an action plan.

As has been observed, systematic treatment options existed in the area of basic skills and to some extent in the Supplementary Education program. Additionally, the systematic approach to counseling content helped to maximize individual counseling needs. A fourth area, and perhaps the most significant in terms of this particular project, related to the systematically selected treatment options in career exploration.

There seemed to be less systematic procedure in this area than in the other EBCE instructional components. Students chose career clusters on the basis of peer influence or tentative preconceptions about the work that went on within a cluster. For example, in health it was noted that a lot of students thought of the popular TV image of Dr. Welby, rather than entering the cluster to examine a wide variety of health related occupations.

During an initial orientation students were introduced to various clusters by representatives of employers within that cluster. But no systematic decision making process seemed to lead to subsequent choices. In the period between one choice and the next one twelve weeks later, there was no evidence that students systematically were asked,

influenced, or expected to examine alternative career exploration choices. Further, it was noted that students were asked to list areas of career interest on the Holland Self-Directed Search early in the school year, but no subsequent activities were directed at exploration of those areas of interest.

Systematic student evaluation existed in the program. Again, it was most evident in terms of the ILA basic skills program. Both at the point of entry and throughout his/her sequential development, a strategy existed for identification of student achievement and progress upon which future learning activities could be based. Further, an evaluative system existed that provided for changes in learning activities by agreement between the student and the teacher who assigned the activities.

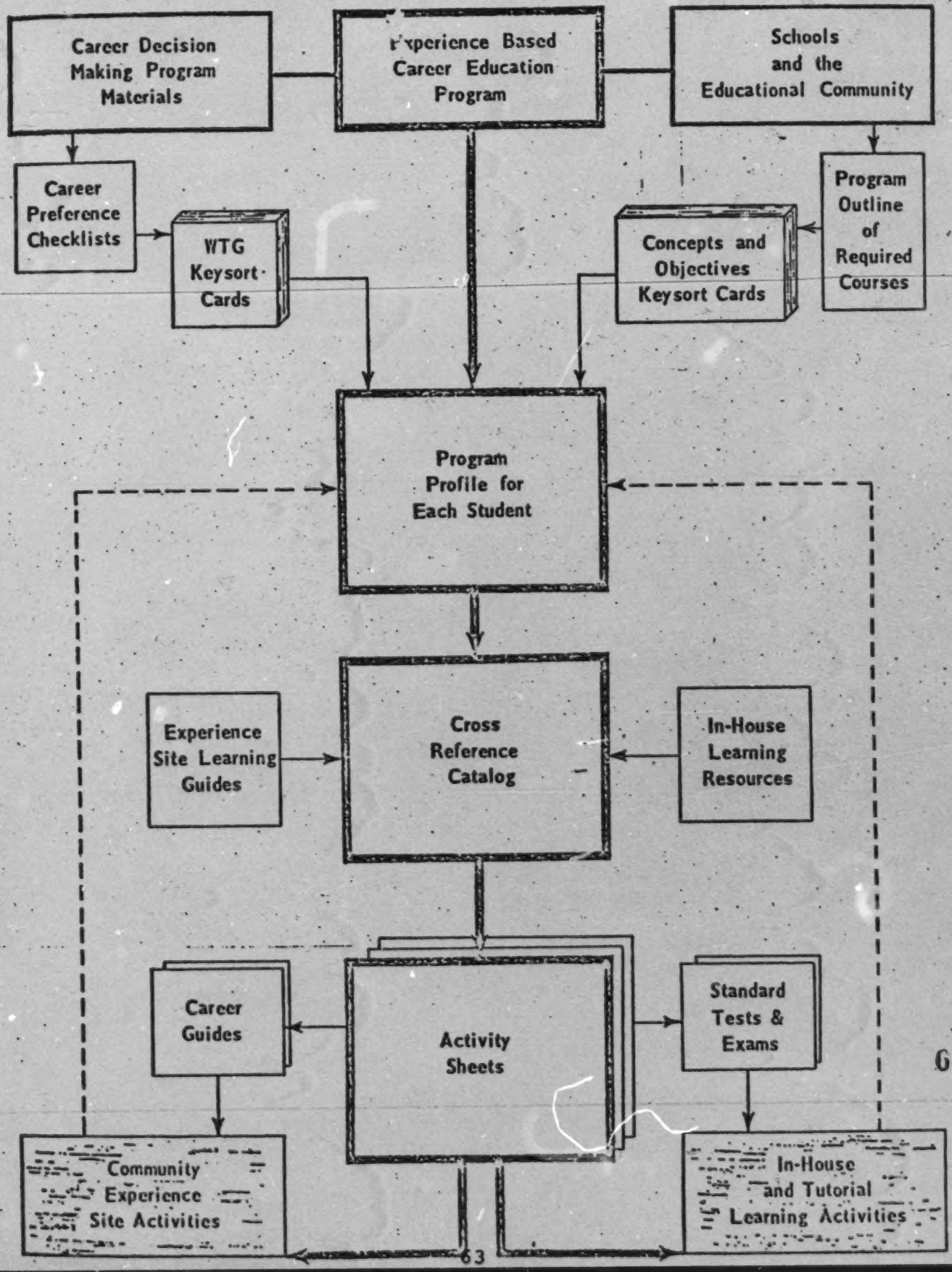
Few evidences of a systematic student evaluation procedure relating to the Supplementary Education program, the counseling program, or the career exploration program were observed.

AEL

This EBCE project was in the process of completing a comprehensive systematic approach which incorporated systems for initial and ongoing diagnosis for student needs in academic and career exploration as well as the systematic selection and/or assignment of treatment options. The total system included planned evaluation components and regular counseling. The procedure is diagrammed on page 63. While the model appears to be essentially complete, some questions remain, for example, whether there is a procedure for determining the type, extent and content of student counseling. The following paragraphs describe specific findings of the site visit.

As noted at the background section of this report, AEL was entering a stabilization phase in the life of the EBCE project. During the site visit, staff training and orientation to a "Basic EBCE Operations Logic" and to a "Student Program Development and Maintenance Process" that had only recently been completed by the project's Design Unit were observed. These systems designs (attached) utilized some existing practices which had been formalized and documented for continuing usage. The designs attempt to lay out the specific procedures followed with students at several stages--pre-entry, entry and orientation, development and maintenance, and post-program activity. At the time of our observations, the operational design was not fully functional. Some components of the design had been in use, but were formalized by inclusion in this new operational design. For example, student assessment during the entry and orien-

BASIC EBCE OPERATIONS LOGIC



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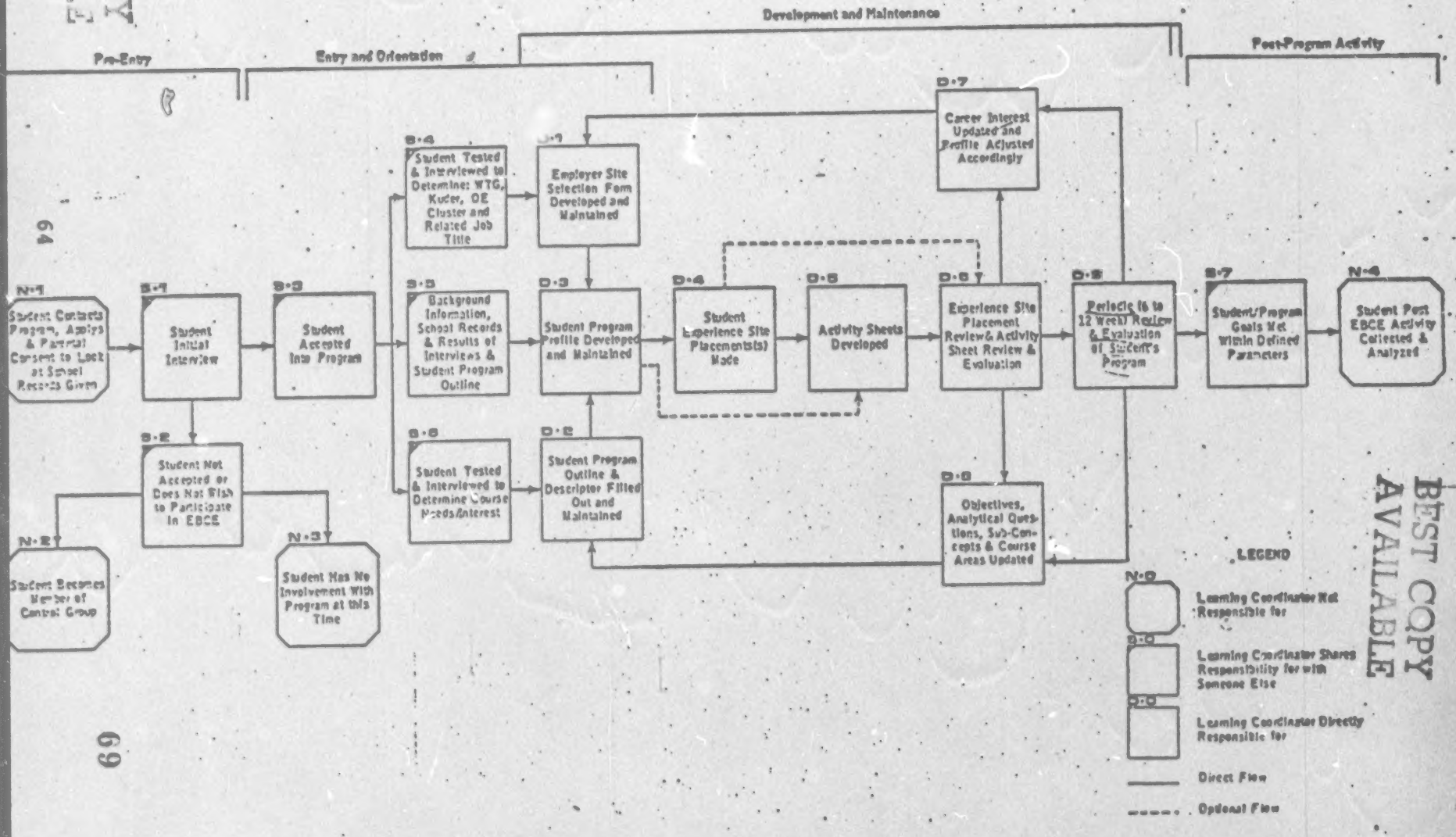
STUDENT PROGRAM DEVELOPMENT AND MAINTENANCE PROCESS


Development and Maintenance
Pre-Entry
Entry and Orientation
Post-Program Activity
N-1
Student Contacts Program, Applies & Parental Consent to Look at School Records Given
S-1
Student Initial Interview
S-2
Student Not Accepted or Does Not Wish to Participate in EBCE
N-2
Student Becomes Member of Control Group
N-3
Student Has No Involvement With Program at this Time
S-3
Student Accepted into Program
S-4
Student Tested & Interviewed to Determine: WTG, Kuder, OE Cluster and Related Job Title
S-5
Background Information, School Records & Results of Interviews & Student Program Outline
S-6
Student Tested & Interviewed to Determine Course Needs/Interest
D-1
Employer Site Selection Form Developed and Maintained
D-2
Student Program Outline & Descriptor Filled Out and Maintained
D-3
Student Program Profile Developed and Maintained
D-4
Student Experience Site Placement(s) Made
D-5
Activity Sheets Developed
D-6
Experience Site Placement Review & Activity Sheet Review & Evaluation
D-7
Career Interest Updated and Profile Adjusted Accordingly
D-8
Objectives, Analytical Questions, Sub-Concepts & Course Areas Updated
D-9
Periodic (6 to 12 Week) Review & Evaluation of Student's Program
S-7
Student/Program Goals Met Within Defined Parameters
N-4
Student Post EBCE Activity Collected & Analyzed
LEGEND
N-0
Learning Coordinator Not Responsible for
S-0
Learning Coordinator Shares Responsibility for with Someone Else
D-0
Learning Coordinator Directly Responsible for
Direct Flow
Optional Flow

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tation stage will not vary from previous practices. There was evidence of similar tests and assessment schedules having been employed in both the 1972-73 and 1973-74 school years. The project obtained information from school records and student interviews and attempted to determine students' course needs at the time of developing a Student Program Profile.

The principal new addition to the process (which was observed only through role play in the staff training session) was a plan for career education program planning based on career preference checklists and a worker trait guide. The system is, in part, a result of a separately funded federal project at AEL entitled "Career Decision Making." Students would be assisted in determining the worker traits of careers in which they were interested, and in locating other jobs which utilized or required similar worker characteristics. The McBee Card Sort process reduced guess work in identifying worker traits in various career areas. A guide had been written which associated those worker traits with a wide range of career areas that AEL had arranged for student exploration. Essentially, this process allowed for considerable objectivity in career exploration choices and was expected to give more precise options to the student who would make the ultimate choice. Finally, a Cross Reference Catalog had been designed to assist each learning coordinator in relating job site activities to the subject area work done by each student, for example, in English and social studies. The learning coordinator would develop activity sheets based on activities the student would be expected to encounter on a specific job site. The prescriptive activity sheet, with specific

activities chosen at least in part by the student, constituted the student's required work in English, social science, math, or other subject areas determined by individual graduation requirements.

The process described above appeared to be promising, though it was not a fully implemented program at the time of the observation. Job site analysis, probably a continuous task as cooperating employers initiated or discontinued participation in the project, was necessary to provide guidelines to the learning coordinators. Progress in this task was a prerequisite to devising the Cross Reference Catalog. The AEL design provided systematic strategies for developing an instructional plan for each student. Progress on individual plans was assessed by the learning coordinators. At the time of our observation, wide variations in quality and quantity of student work resulted from the differing demands of the learning coordinators much the same as is seen, for example, when teachers of the same subject in the same school apply different quality and quantity criteria.

Mountain Plains

This project was in its developmental phases. Consequently not all procedures had been systematically defined. However, at the operational level certain systematic proceduses did exist, most notably in the student academic diagnostic procedures, job selection training and change, and in counseling.

The following is a brief description of the various systematic procedures:

1. Student Selection

Mountain Plains had designed a student selection process which, while systematic in procedure, appeared aimed toward exclusion rather than selection.

Located within each of the six states are field coordinators who had, among other tasks, the initial responsibility for recruitment or referral investigations. Mountain Plains state staffs conduct and complete the recruitment, interview and selection process for those families wishing to enter the project. The criteria for selection appeared limiting and restrictive. The Selection Criteria (see Appendix C) consisted of various items presented in a negative statement, for example:

- No families will be allowed who must pay out more than $70/month to cover debts or prior obligations (alimony or child support.)
- No persons with legal or civil suits pending will be allowed unless acceptance by Mountain-Plains will satisfy the legal obligation.

- No persons with the following health problems will be allowed:

  a. diabetes not controlled or with complications
  b. epilepsy with more than three seizures per year
  c. history of previous myocardial infraction with congestive heart failure or other complications.
  d. Tuberculosis active or positive X-Ray
  e. Cancer - past or active
  f. physical or structural disability that restricts mobility or requires help from others
  g. active venereal disease
  h. malignant hypertension
  i. vision not capable of reading newsprint - 16" to 18" vision (This will not be a screen out if vision is correctable.)

Mountain Plains countered that the objective of such criteria was to "estimate behavior problems which cannot be handled by Mountain Plains."

Consequently, those families (participants) selected had been screened to such a degree that it appeared only the most acceptable from among the target population were served, barring many in greater need of such assistance.

2. Academic Diagnostic Screening Procedure - Other criteria for entry into M.P. stated:

   - No husbands/wives/parents will have a reading level below 5.0 (WRAT Reading Test)
   - No husbands/wives/parents will have a math level below 4.0 (WRAT Math Test)

Students upon entry were given a battery of tests including the Stanford Achievement Test (SAT) used to confirm the educational status and needs of the participants.

After review of test results, participants were placed in a

Foundations Education program where they were given basic skills education in an effort to raise them to the reading or math level necessary for their particular career choice.

3. Orientation and Core Curriculum

Following testing, during the first days of entry into the program, participants embarked on an orientation program of up to five weeks in length.

Initial orientation involved the introduction to the program staff, discussion of program objectives and assistance in adjustment to the M.P. environment.

Following this segment, the participants were involved in a more "specific format" of orientation. This process was termed the "Family Core Curriculum." All participants participated during the first few weeks in the program. Some of the courses offered through this process were:

- Health Education - a basic health program given for twenty hours over that initial five week period.
- Home and consumer management - an expansion of an earlier consumer education program. The two courses were aimed at developing the participants' skills in better home planning and management, including banking, budgeting, decorating, grooming, consumerism, planning, etc. The Consumer Ed. section required approximately 15 hours and the home management portion required 20 hours.
- Career guidance - equipping participants with the materials and knowledge necessary to initiate career exploration; to

make career choices; to develop interpersonal skills; to develop a "marketable self," etc. During this course, students were assisted in beginning their actual exploration of job and career opportunities through the Mountain Plains program. After having sat in on group interest sessions and having gone through an individualized interpretation of the Ohio Vocational Interest Survey and the General Aptitude Test Battery, the student was then permitted to explore (by reality testing) - that is to spend a day or so with one of the career areas to ascertain if the results of the OVIS and GATB did indicate a possible career slot for the participant.

4. Counseling - This program offered the participants a series of group sessions where various types of personal, social or familial problems were dealt with so that participants were able to concentrate on program studies.

5. Career Guidance - A seemingly well defined and strong systematic procedure was observable in the Career Guidance area.

Following the first five weeks of orientation and exploration, the participant choices of the career areas for in-depth exploration and training were reviewed through the Career Guidance group which was responsible for many of the Core Curriculum Activities.

Students selected from the five areas available at Mountain Plains: office education; food services, lodging service, mobility and transportation occupations; and construction and building trades occupations (a new area - marketing and distribution - was being planned

at the time of site visit).

On selection of these areas, the participant decided on the level within the career ladder of that area, for example, in office education such levels would include: file clerk, receptionist, clerk-typist, and stenographer and secretary. There were various educational requirements for various positions, so that it was necessary for participants to take courses necessary to reach minimal educational requirements. Students received basic skills instruction through the Foundation of Education section. The courses were individualized through use of Learning Activities Packages (LAPs) and multi-media training instruments.

While acquiring these basic skills, students also began training in the career areas of their choice. Training in occupational areas relied on individualized approach and lasted from six to eight months or more, depending on the ability and effort of the participant.

Students were monitored and reviewed every six weeks for the purpose of assuring progress in the program. If progress was not indicated, participants were counseled to or were allowed to change areas of exploration and training.

When a participant decided he was not satisfied with the area selected or when it had been determined that the student's progress was not satisfactcry as a result of the six week monitoring process, then a program change was considered.

Program option changes were differentiated from program level changes, in that the program option change indicated a major move from one area to the other such as from food services to office education,

whereas a program level change was moving within the area either up or down the career ladder according to indicated ability and achievement, such as a move from receptionist to clerk-typist or secretary.

If the problem was one of academic achievement--the student not passing the various tests, both basic skills and occupational education--then the foundation education staff was responsible for identifying the causes and suggesting possible solutions. For example, if a union requirement stipulated its auto mechanics should have an 8.5 grade average in reading and if a 6.5 reading average was necessary to read the manual, then achievement of goals had to be assessed in considering a program or level change if the participant did not progress to an acceptable minimum level.

Students were retested or other methods of the individualized learning approach were attempted. If progress still was not shown, the student might be advised of a program or level change where lower reading ability would not hinder his or her progress.

If the problem was one of placement dissatisfaction--the participant, for some reason, no longer liked the job for which he was training--the Career Guidance division was responsible for assisting the student in evaluating whether or not a program or level change was indicated and if so to what area or level. The Career Guidance staff relied on various assessment tools to help identify the problem or the solutions. A review of such test results as the OVIS or the GATB might be indicated or additional instruments such as the Personal Orientation Inventory, the Mooney Adult Problems checklist or the 16 P.F. might be used in planning the next move of a participant.

Although job exploration was encouraged at Mountain Plains and three changes were possible for each student, there was a concern about those participants who are identified as "chronic program goers" (People who move about the country taking advantage of federally sponsored training programs) or the "hangers-on" (people who find their houses and their lifestyles too nice to leave.) It is feared that those students use the program change "at the last minute" to prolong their stay. Counseling staff members documented some participants who had employed such a technique to extend their stay from approximately one year to eighteen months.

Because of the costs which this entailed, the career guidance unit monitored the progress of students every six weeks in cooperation with the Foundation Education and the Occupational Preparation staff to identify such problems as early as possible.

2. Determining

This element, as defined in the preceding chapter, relates to the type of assessment process employed. The preceding section focused, in part, on whether or not any systematized procedure for diagnosis existed in the three projects. Here the focus is on the scope and type of assessment procedures.

RBS

The assessment process at RBS had a well developed program for assessing student needs in the Basic Skills program and to a lesser extent in the Supplementary Skills program. The basic Skills program at RBS afforded the most direct relationship between student assessment and instructional prescription. Each student took an Entrance Test

and from the results he was scheduled into any of eight levels within five skill areas of reading and eight skill areas of math. The student could demonstrate sufficiently high skills to bypass basic skills instruction or could receive enrichment activities related to reading and math. The key to this entire process was the ILA program, which was developed at RBS.

The project held as a major goal the ability to get each student to the high school diploma level. This necessitated, in part, determination of credits needed to satisfy state course requirements. It also meant that some elective courses had to be available for the students who were twelfth graders in the program. The Supplementary Skills program provided ongoing assessment of student needs, developed course options for them, and aided students in satisfying high school requirements. This component will probably phase out of the RBS program if an enrollment pattern is maintained in which new students come from a Philadelphia high school. They could take various electives at their home high school and satisfy course requirements in areas like physical education and driver training.

Counseling assessment appeared to have measures for determining student interests and aspirations although it was not clear if there was a systematic procedure either for raising student aspirations or for making them congruent with abilities.

Counseling and Guidance conducted at RBS focused on providing a set of experiences aimed at personal and job skill development. In the area of personal development, for example, a

curriculum approach had been developed that began with a self-assessment, examined ways the program could help overcome identified deficiencies and formulated an action plan for meeting students' goals. In another guidance curriculum unit, students engaged in a personal position audit, another attempt to examine where they were, where they wanted to go, and how to get to where they wanted to go. Both standardized tests and non-normative exercises were included in this process. The design of materials in the guidance and counseling areas gave evidence of careful attempts at both self-and counselor-assessment procedures. Time constraints did not allow the team to view counseling and guidance sessions in process. However, the mechanics for assessment activities were present in prepared curriculum guides.

Assessment procedures related to Career Exploration were not in evidence. In this area, students appeared to enter cluster areas based on their desires and interests. However, formal measures or standard assessment procedures for determining those needs and interests either were absent or were not visible as determinants of placement. That is, other than the student expressing an interest, often based on sketchy knowledge of what a cluster might encompass, we observed no strategies by which regular assessment procedures led to career exploration placements. It should be noted that most students who were two years in the program would examine six of the twelve clusters that had been defined. Unlike some EBCE programs, there seemed little repetition of a cluster area over the two years in the program unless the student reentered one on a specialization basis. Thus, the range of experiences provided a broad sampling of available options even though there appeared to be few formal

procedures for aiding the exploration choice. One of the ways this choice was reportedly made was through direct student and counselor/coordinator meetings. While we did not witness such sessions, we met with a number of students who particularly noted the more limited access to counselors this year than last. This was due partly to a changing role for the counselor and partly because the counselors were physically removed by several blocks from the Academy.

AEL

The assessment procedures at AEL seemed to be somewhat more limited than those at RBS partly because the latter used the ILA program which incorporated extensive academic assessment, and partly because the AEL program served 12th graders only, thus limiting the amount of supplementary course work (and corresponding assessment) which had to be completed for high school graduation.

Primary diagnostic procedures included a determination of courses needed to complete the graduation requirements of their Kanahwa County high school, a review of school records which contain subject grades, test scores and other demographic data, and administration of the Kuder Preference Test and the Iowa Test of Educational Development (ITED). For the Career Education component, students listed career areas, if any, in which they had a special interest or desire for information.

In designing the Student Program Profile, not all of the above data was utilized. It required four to six weeks to obtain test results on the ITED. A student's program was well underway by the time these results were obtained, so that the contribution of the ITED served more of an evaluative than prescriptive purpose.

Much controversy has arisen over the use of standardized ability tests. None was observed in the diagnostic procedure at AEL and very little information of this nature was available on each student. On a sample of 24 of 45 current students, no I.Q. measure was found in the records for 12 of them (50%). For those where scores were shown, it was usually an Otis or Otis-Lennon group I.Q. test given in grade 6. It seems unlikely that student ability measures provided a significant input to the design of individual student programs.

As has been observed, AEL enrolled almost exclusively students in grade 12. The reason for not enrolling 10th or 11th graders was cited as due to the uncertainties of program continuation funding for ensuing years. Also, by enrolling students who are in grade 12, they are virtually assured that the student will be over 16 years of age and will be eligible for placement on job sites with fewer Fair Labor Standards Act (FLSA) restrictions. Choosing students within their last year of high school matriculation further delimits the range of academic requirements that must be served. Almost all students needed some form of English or communications work for completion of state requirements for graduation. Other basic instruction in math, social studies, and natural science was offered, but math and science courses such as trigonometry, calculus, and physics were not available and students who needed or wanted such courses were not encouraged to enroll in EBCE. The need for extensive diagnostic procedures in these supplementary areas did not appear significant. Discussion with AEL staff revealed that major emphasis in program planning was placed on student interests and desires. However, the assessment techniques for determining such interests and desires appear to be rather limited. On an initial information form completed during recruiting sessions,

students were asked to list areas of career interest. In a sample of 24 participants, 18 listed one or more career interests. Ten listed 3 or more choices. The attempt to determine student exploration activities appeared to emanate most directly from these stated desires, both in the program's past procedures and in the newly established design. For students who were undecided or uncertain about their interests, discussions with learning coordinators or counseling staff presumably determined the career exploration area in which initial experiences should occur. AEL practice would seem to suggest that students' choices or any expression of interest in a job area would be the primary placement determinant. The project arranged tours of sites for small groups of students in order for them to observe some of the types of work that could be explored. Among 64 employer sites participating in 1972-73, six sites were used almost exclusively for student tours. They included a legal research and defense group, an electric company, a telephone company, a state government agency, and a restaurant chain. Other tours to a variety of sites were used to enlarge students' career perceptions.

Mountain Plains

The academic and guidance assessment processes of this project were described in the section dealing with "systematic procedures." In addition to these assessment components, the counseling section at Mountain Plains also employed a rather extensive diagnostic procedure. The Career Guidance section worked with the Counseling unit in determining interests and aspirations as well as social and emotional needs.

These two groups worked together in the initial orientation of students to the project and in the continued effort to teach students

the materials necessary to make career choices and to resolve personal and family problems during the time that they were at M.P. During the orientation, they tried to stress that it was a career education rather than specific technical training that they wanted students to receive. They stressed interpersonal skills and ability to present oneself in a marketable fashion; they attempted to get the students' goals straight and to raise their aspirations. After initial testing on the Ohio Vocational Interest Survey and the GATB, students moved into the family core required courses. An attempt was being made to move the guidance curriculum away from a hard core curriculum program into activities which were more meaningful to the clients in reviewing work areas in which they would be interested. Guidance was defined as information giving, sometimes through group processes. In these initial activities, students tended to have few decisions in the work that they did because it was a prerequisite to making later career choices or occupational preparation decisions. It was indicated that role playing and socio-drama was utilized in group work in the career decision making processes. They set up a mock situation and then had the people function or act out roles within this mock situation. A new piece of the career guidance curriculum involved a unit called The World of Work in which students would be once again given training in how to apply for jobs, how to interview for jobs, and other such personal characteristics or qualities needed in acquiring employment.

In the counseling area, an attempt was being made to involve people more and more in group processes rather than in individualized counseling. It was said that many of the clients could very quickly and easily become dependent upon counselors, and an effort was being

made to reduce the possibility or the frequency of such dependency. The counseling department used an assessment procedure which included the following tests: 16 P.F., Personal Orientation Inventory, Mooney Adult Problems checklist, and a local questionnaire. The choices that individuals had for counseling included group or individual counseling with or without the spouse present.

3. Ongoing basis

As defined previously, "ongoing" relates to the frequency of assessment. This does not suggest that frequent intervention is essential, but rather that there is recognition of the need to continously examine student progress and placements.

RBS

The most systematic ongoing assessment occurred in this program primarily as a result of the involvement with the ILA program which incorporated a continuous monitoring evaluation mechanism. A notebook was maintained for every student engaged in basic skills work. The student's placement in various ILA activities was recorded and when students completed each performance objective, they proceeded to the next. When a given level was completed, students moved to the next higher level. Usually, they were expected to achieve the objectives within all areas of math or communications skills at a given level before going to the next level. For example, students would not be likely to move to a higher level in addition-subtraction unless they had also completed the applications objectives at that level. The ILA approach required a regular review of student progress and appeared responsive to the criterion of ongoing assessment.

The frequency of assessment in the Supplementary Skills program appeared to be mainly a function of course completion.

The frequency of assessment as it was a part of the Counseling Guidance program appears to have been hampered this year as a result of the location of the counselors.

The counselor/coordinators, positions that were subcontracted to the Chamber of Commerce, were housed in a building several blocks from the Learning Center. Each week several of these persons presented guidance classes to groups of 10-15 students at a time. In addition to their responsibilities for coordinating the career exploration portion of students' activities, their role included direct personal counseling with students. One-to-one involvement with students seemed critical to maintaining an awareness of the problems and needs of students. Yet the placement of the counselor/coordinators made it difficult for them to be continuously aware of student concerns. Not only in personal matters, but also in the career exploration program, it was important for student reactions to be regularly and openly perceived. For the same reasons noted above, students reported they did not talk much with counselors about their progress and response to their experiences in the various career clusters.

Within the area of Career Exploration the need for frequent assessment beyond that which was regularly scheduled (every 12 weeks) was mitigated somewhat by the frequency of changes within clusters.

Students at RBS usually engaged in exploration in three clusters each year. If a student entered a cluster and found that he did not, for whatever reasons, wish to continue, it was indicated that he could change but that was definitely not encouraged. Each 12 weeks a new cycle began and within each cluster students went to the same employer only three or four times. Thus, any dissatisfaction at a given site was likely to be dissipated by alternating to another site every few

weeks. The project seemed sensitive to students' desires, but did not encourage frequent changes in career explorations.

AEL

Although it appeared evident that program interventions occurred frequently for students in this project, it was not clear to what extent these changes were the result of frequent assessments of student needs and progress or to what extent they were routine scheduling changes.

In the area of Career Exploration a review of weekly work plans for our sample of students indicated a pattern of frequent site exploration change. Records displayed program activities over approximately 16 weeks of the 1973-74 school year. For students who had been in the program for the full 16 week period, the minimum number of sites explored (i.e., at least three days on site) was two. (One exception was a boy who had been in the program slightly over a month who had had one assignment.) The modal number of sites explored was five and the average was 3.9. The records showed that fifteen of the twenty-four students had repeated a second stint at a previous placement, though not necessarily on consecutive assignments. Many of these went to different job areas at one location. For example, a student might move from the emergency room to the physical therapy section of a large hospital. We counted this as one placement, but it was apparent that ongoing assessment occurred to modify the placement. In other instances, students returned to the same general duties at the same location because of a need to obtain more information about the site and its career potential. No evidence was observed in which a student remained at a single site longer than three weeks without review and reassignment to that same site or to another

station. Learning coordinators were reported to visit students' employer sites, and a few reports were noted in the files of such site visits. However, in no instance did we locate more than one per file despite the fact that the average number of sites explored was nearly four. (A secretary reported that some reports of site visits during the preceding two weeks had not yet been filed.) The data would seem to suggest that learning coordinators (there were seven listed on the organizational chart) did not routinely visit each student at each employer site.

At the same time that a student explored an employer site, he had other school assignments. Some were to be done in concert with his career experience. For example, an English assignment might include interviewing and writing a report on the work of a specific department administrator. A science assignment may include participating in and explaining the procedure for blood analysis in a hospital laboratory. Other school assignments required that the student attend the learning center. Records we reviewed showed that each student spent at least one day each week at the learning center. There it was possible to work in the learning lab on activity assignments, to meet with counselors and/or learning coordinators, and to practice in the typing lab. It appeared that academic assessment occurred on about the same frequency cycle as Career Exploration assessment. The specific system and content for academic assessment was not evident.

Mountain Plains

As has been discussed in the preceding sections, the Mountain Plains project has mechanisms for the ongoing assessment of students in the areas of career selection and achievement and in counseling.

Student achievement of curriculum objectives seemed to be the key to evaluation of the appropriateness of original job selection. When

lack of progress was observed, the career guidance and counseling sections worked with the student to determine whether problems were the result of inappropriate job selection or if they were related to personal problems. This process has been described earlier (p. 71).

4. Needs, Interests, Aspirations

Much emphasis has been placed on student academic needs throughout this paper. It has been our position that while forced choices may be inconsistent with the theoretical concept of total individualization, certain skills (most notably reading and mathematics) are so basic to successful living and to optimizing career choices a program may have to insist on student achievement in those skills and provide appropriate instruction time. Student needs are not limited to basic skills, however. Other academic requirements are also needs which the program should accommodate and, of course, students have social and personal needs to be met.

In the context of career education, student vocational interests would seem to be the most significant interest area to be considered. However, the programs must also take student interests into account in the selection of adademic programs and materials.

The problem of inappropriate levels of aspirations especially among women, minorities and the disadvantaged was discussed at some length in Chapter III. The primary points of emphasis were that programs should assess aspiration and ability levels carefully in order to both maximize congruence between them and to attempt to raise the aspirations of those students who appear to have settled for too little.

RBS:

Based on the definition of individualized instruction adopted in this study, it appeared the RBS program was in concert with the

position enunciated herein regarding basic skills instruction. That program has already been discussed, but it is important to note again that the structured basic skills format and required participation for those with low achievement in these vital communications and math areas represented responsiveness to student needs. Beyond academic needs in the areas of basic skills, efforts were made to accommodate both needs and interests in the supplementary skills program and in the elective courses provided in the regular high school.

Students needs were exhibited on another level when they came with personal, social, and educational problems to the school staff. Staff people appeared to be aware of and sensitive to those student needs and seemed to take extra minutes to respond to student's concerns. Moreover, the students interviewed were open and willing to share their feelings about the EBCE program. The environment in the learning center seemed conducive to a sharing of feelings and ideas, which suggested existence of an open atmosphere in which student interests would be heard and responded to.

In contrast, recall the separation of the counselor/coordinator group from the learning center. The individual counselors with whom we visited showed concern for students' career exploration needs and their personal aspirations. Yet when a student had a pressing problem, he could not easily express it to the counselor/coordinator staff. Instead, he was more likely to discuss the problem with learning center staff, with peers, or to repress or internalize his needs. A relocation of the counselor/coordinator staff would bring them more actively into a position of ongoing interaction with students.

In our visits to EBCE sites, including RBS, there did not appear to be any unique or specially scheduled activities designed to modify student aspirations. One staff person at RBS viewed the entire career exploration program as a mechanism for changing attitudes and aspirations. He noted that the intent of exploration was to give students exposure to a full range of jobs in a given location and at three or four locations within each cluster. In two years in the program a student could explore six clusters, up to 25 job sites, and the wide variety of jobs that would exist within those sites. It was felt that this entire process specifically strives to provide experiences that will impact upon students' goals.

The RBS cluster approach is based on an "institutional approach" as opposed to an "occupational approach." The former emphasizes common work functions and occupations within categories that cut across institutional lines. For example, bookkeeping and accounting functions would be found in nearly every enterprise in some form. The RBS "institutional approach" has grouped employers under twelve clusters as follows:

1. Communications and Media
2. Health
3. Manufacturing
4. Government and Public Service
5. Marketing and Distribution
6. Transportation
7. Construction
8. Apparel
9. Utilities

10. Labor

11. Finance

12. Education and Personal Development

A student who participated in a given cluster would gain exposure to the wide range of jobs related to that cluster. In health, for example, he would observe functions ranging from basic custodial jobs in maintaining a hospital to technical jobs in laboratories to professional level jobs such as nursing, pharmacy, and physician activities. That range within each cluster, it was argued, does much to broaden the interests and modify the aspirations of students, without imposing external values on students. There seemed to be some reluctance to design and initiate programs which were specifically intended to alter and "upgrade" the aspirational level of students.

The rationale for this position at RBS might be related and referenced to their guidance philosophy. That position was that an individual should have freedom and responsibility to make decisions. The ability to make those decisions is based on information and experience which the organization provided through its developmental and educative functions. "A student is helped not only to deal with immediate concerns, but to identify more deeply who he is and what he might become." (Career Guidance Unit Background Information, I. A Rational for Guidance.)

AEL

It has been suggested that some basic skill instruction may have to be required for students with limited foundation skills in areas such as reading and arithmetic. In accordance with instruction of this sort, it is necessary to diagnose the learners' current skills and abilities and then to design a prescriptive program of

remediation, if necessary. Participation by the student in such a program will, in some instances, have to be imposed as a requirement of EBCE matriculation. However, in the AEL program no standard diagnostic tests of school achievement were observed, nor were group or individual tests of ability used to get a global view of what might be expected from each student. Every student had an opportunity to display his skills and abilities without pre-judgment and such an opportunity for open choice and exploration seemed appropriate for students, many of whom have experienced frustration and failure in the past. When new frustrations arose out of EBCE matriculation that were the product of limited basic skills, an individualized mechanism or program to remediate or improve those skills seemed lacking.

However, the AEL program placed major emphasis on student interests and desires in program planning. Specific learning activities to satisfy high school requirements were designed and monitored by learning coordinators. These people had a responsibility for tailoring the assignments to individual students and for establishing quality and quantity requirements to fit each student. The project required that each student select two subconcepts each nine weeks from one or more of the five concept areas it offered (social science, natural science, mathematics, communications, and career development) depending on the subjects in which the student needed credit. Within any subconcept (there were 122 to choose from), the student selected at least two instructional objectives to complete during the nine week period. The process was primarily one of student choice of objectives for quarterly concentration, with judgment of accomplishment left to

the individual learning coordinators. Some problems arose in this procedure, since not all L.Cs were expert in all subject areas. Indeed, in the first year of operation, the L.Cs (formerly called program managers) were employed because of knowledge or skill in a given subject area. One L.C. in reporting a student's work for the first nine week period in 1973-74 noted that the student was doing well in higher algebra "so far as he could determine." While his observations were more exact in other subject areas, his lack of expertise apparently limited his ability to make a precise appraisal in this one area. That was neither unexpected nor unpredictable, since few persons would possess a full range of information across the 28 courses which AEL lists for high school credit. No mechanism was observed or described to us by which certain technical areas were regularly assigned to L.Cs who had specific academic training, for example, in chemistry, algebra, or economics.

As was observed, aspirations are also significant facets of program individualization. When aspirations are discordant with aptitudes, the program should assist the individual in resolving the discordance. One way such resolution can be achieved is through personal counseling to consider the available alternatives. In the AEL program each learning coordinator held a counseling responsibility. In addition, a senior staff member at the doctoral level worked directly with students on the resolution of personal problems either involving some aspect of their daily life or in career exploration decision making. Two other positions were filled by counselor/coordinators, both of whom were reported to have had previous counseling experience. At least ten people

in the EBCE program thus had assigned responsibilities which include counseling of students having personal or career choice problems. Given that one of counseling's principal goals is to assist each student in optimizing career goals, AEL provided a significant level of counseling assistance.

Another way to view career aspirations is to record changing student goals through the course of an EBCE program. One staff member at AEL examined the stability of scores on the Kuder Preference Test for 1972-73 students. The test was administered three times during the year but no significant changes were noted. Another instrument used in 1972-73 was the Career Development Inventory which is intended to examine maturation in career decision making. The results of administration of this inventory are discussed in AEL's report number 37 - Analysis of Scores on the Career Development Inventory, September, 1973. The measure suggested good gains in maturity during the first semester of 1972-73. Neither the continuing students nor those who entered in February of 1973 showed any significant change when retested again in May, 1973. It should be noted that changes on such tests do not necessarily imply increasing aspiration, perhaps only greater realism. It was reported that the objective of the EBCE program was to encourage realistic career choices, a concept not synonymous with increased aspiration. The stated educational goals of AEL indicated their desire to develop in students the "ability to make appropriate career decisions" and to "become knowledgeable about careers, jobs, and the job market."

Mountain Plains

It was observed that much emphasis was placed on initial and ongoing assessment procedures relative to needs, interests and aspirations in this project. This emphasis may be related to the fact that this program was not in the business of helping adolescents explore career options, but rather in the serious training of adults, most of whom have family responsibilities, to function in the real working world upon exiting from the program. Additionally, the project dealt daily with the social and vocational problems of the disadvantaged (both men and women), the population from whom the project's clientele are drawn. The determination of needs has already been described, however, this project dealt with unique problems (as compared to other Career Education projects) relating to interests and aspirations.

In terms of interests, one major problem this project faced related to people previously mentioned and referred to as "program goers." When a student expressed an interest to move to another area and change his plan, the project encouraged that he explore in several areas, see what was going on there, and learn about the demands of different jobs before a plan change was implemented. The problem that continued to plague the project was that not everyone moved to the end point of his training program. The project staff took the position that whether or not the final goal was accomplished, there should be some benefit to the student through his participation in the program, and his ability to go out and get a job should be enhanced.

The problem of dealing with student interests was especially confounded at Mountain Plains in dealing with the minority groups. Approximately twenty-four percent of M.P. students are minorities, mostly American Indians. The choices made by American Indians and other minorities were said to closely resemble those of white males. However, fewer minorities finished the program than was true proportionately for white males or females. It was stated that many Indians felt they might be ostracized if they learned a trade or a skill and then had to leave their previous culture in order to utilize that skill. This is an almost inevitable result of the training since the kind of training offered and the kinds of skills obtained may not be marketable on Indian reservations and may require jobs within nearby cities, sometimes major metropolitan areas. Indian retention in the project was said to be inversely related to the distance of M.P. to their reservation. The closer the reservation was to Glasgow, the more likely they were to return to the reservation and resign the project.

In terms of aspirations, it was noted that many participants come with expectations that are too high and expect to be transformed at M.P. in short order. A few people such as minorities and women may often come in with expectations that are too low and the job with them is to raise their aspirations. White, migrant type males, people who have moved around a good deal in jobs in the past, tend to see the program as one that will train them for jobs at a very high level, such things as lawyers and scientists. These people were said to have very low ego strength who tended to overcompensate by setting impossibly high goals. It was noted that many of the men at the project wanted their wives in jobs which were more

of a subservient nature, and resented the wives becoming so skilled that they could operate independently.

Indian wives were said to have particular difficulty at M.P. because they were part of an extended family and found that completely lacking at M.P. Some of them went back home to the reservation and often forced their husband to resign the project and join them. In an attempt to combat this, the project was working on a community development effort where Indians interact with one another as a kind of Indian Union group.

While all training options were open to women, most women came to the Mountain Plains program thinking about jobs which have traditionally been filled by women. This was illustrated by the fact that the major proportion of women go into office education occupations. Not only the woman's attitude about the job, but frequently her husband's position as well tended to determine where she chose to receive her training. Additionally, the types of jobs available to women in their home towns affected their choices. One area where women took a good deal of work in the past was the area of social service aide. However, because of government cuts in such programs nationwide, the market for such jobs has shrunk remarkably. M.P. discontinued that program.

Only three to five women have been in drafting and only one or two in small engine repair. Some will probably go into marketing and distribution when that cluster is developed.

In the practical application of aspirational levels, it was stated that some job clusters have lower status, for example, food services. It was indicated that many of the students had previously

worked in restaurants as waitresses, cooks and dishwashers and generally had a bad image of the food services area. They did not think about the high level chef, but identified rather with the hash slinger, short order cook, or other menial help found in a food services establishment where bad hours and other working conditions are not always favorable. It was noted that a few significant successes had occurred in a couple of areas such as motel management, and there was a major rush on the part of many students to enter this program.

5. Providing Options

This component is the single one most frequently equated with individualized instruction. As defined in Chapter II, a comprehensive system of individualized instruction in a career education project should include a variety of options in the areas of academic instruction, career exploration, and counseling.

RBS

The basic skills program has been discussed at length as has the range of instruction available to students within the ILA mathematics and communications skills areas. Students who complete these programs successfully should possess, at a minimum, ninth grade level skills. It should be observed, however, that in the ILA program (as in other pre-designed curricula) once the student's deficiencies had been ascertained and a prescription developed, the instructional objectives and learning activities were limited.

All students with similar areas of deficiency proceeded through the same instructional components. At this point the major individualized feature appeared to be the rate of learning.

A more extensive series of options existed both in the Supplementary Program and in the Career Exploration Program. Students who already had attained the ninth grade level of skill development entered the Supplementary Program. Students in this program were primarily those who were in their second year at the Academy. First year students from Olney took courses of an elective and supplementary nature at Olney before they left there each day.

In the first quarter of the 1972-73 school year, RBS offered twenty-one courses in the supplementary program with enrollments ranging from 1 (in Physics I and German) to 20 (in Psychology). These courses were taught by employers, RBS staff, and outside contractors. In the second quarter, thirty-six electives were offered and in the third quarter twenty-seven choices were available. Physical education was included in the cptions each quarter. A general trend over the year was for courses to be conducted by individuals or agencies other than employers and RBS staff, frequently on a purchase-of-services basis. The Supplementary Program provided the courses which students took to meet state requirements for graduation.

In the second year, the number of students who were participating in the Supplementary Program had dropped since it primarily served the 70 carry over students from 1972-73. The effect was

to reduce the number of available options, a fact that was voiced by several students who felt the EBCE program was losing its variety and was, therefore, not as sensitive to individual student needs as it had been in year one.

The Supplementary Program had not developed systematic standardized or individualized objectives in the same manner as was noted in the ILA materials. While the options were fewer than in year one, the extensiveness or lack of it seemed less of a problem than was the need for careful development of objectives for students either by supplementary course instructors or by Academy staff when students entered a class. Privately contracted courses might individualize their objectives, but there was a need for "consistency" in student objectives and student expectations in Supplementary Programs which could not be fully addressed by the limited staff in this area. It should be noted that in year three, 1974-75, the problem will largely disappear if the current plan of recruiting students from one or more high schools is followed.

RBS listed 12 clusters for Career Exploration (listed previously) from which students would choose at least one per quarter. One day each week the student spent a full day at his scheduled site. Within each cluster there were usually three or four locations that he visited, primarily to observe the range of career opportunities at each site, the employment conditions, and the kinds of job skills and responsibilities that were required. We did not obtain evidence to demonstrate that the Career Exploration activities were directly related to students' interests. They did reflect student choices, but we were told that the choices were often made based on factors such as how easy or how much fun the program was reputed to be, whether free lunch

was provided, what peers thought about the cluster, what seemed most convenient, or what popular image the cluster may hold. It was said that few students were used to picking a program based on honest, carefully-conceived career interests.

Student options seemed more fully realized when a student chose and entered Career Specialization. The twenty-eight students in this activity when we visited had had four to five exploration experiences and had chosen one for more intensive investigation. At that stage, individual objectives were set between the student and counselor/coordinator to assist the student in examining a specific job and cluster as thoroughly as possible. There was no requirement for Academy students to enter the specialization phases, but some had found areas that interested them and had opted for further analysis in a specific career area. It was only at the specialization level that students began to get significant hands-on experience. Such experience was very limited and superficial during exploration, according to one staff member we interviewed.

Finally, while the range of counseling approaches available to students was not very broad, the content of the counseling was flexible and responsive to a wide variety of student characteristics and interests. A brief description of the counseling program is included in the discussion of "systematic procedures" in this chapter.

AEL

This project offered a wide variety of options to students in academic subject areas and in career exploration activities.

In the academic subject areas, AEL listed 28 courses for high school credit in five concept areas (natural science, math, social secience, communications, and career development.) Within

the five concept areas were 122 subconcepts for which there were a total of 450-500 objectives. Certain subconcepts and objectives were applicable to more than a single subject area, but their emphasis varied depending on the specific application. Since AEL accepts primarily seniors, the list of 28 courses seemed both comprehensive and adequate to serve student needs. Further, it should be noted that while almost all students had high school requirements to fulfill in communications or language arts, many had no other required courses left when they entered the EBCE program. Thus the list of elective courses seemed sufficiently broad for the population served (except, as noted earlier, the absence of reading and math remediation programs).

Options in the career exploration area were very extensive in relation to the student enrollment at AEL. In 1972-73, they listed 64 separate career sites which were cooperating with the EBCE program. As of December 17, 1973, that number had increased to 100, including the addition of 18 labor unions. Within each site there were levels of involvement ranging from a site tour, to exploring the site, to completing an exploration guide for that site, and at the highest level, to investigating the site over a longer time than the three to four weeks required for exploration.

AEL in 1972-73 cross referenced its job sites across 15 career cluster areas to ensure the opportunity for students to experience a full range of job clusters. While these sites were cross referenced so that a given site offered experience in several cluster areas, it was noteworthy that the fewest opportunities were in manufacturing (4) while there were 31 stations that offered public service and business and office experience. In an area with

High industrialization, it would be very possible to obtain many more manufacturing stations, but these had not been emphasized in the recruiting efforts. A seemingly conscious effort had been made to enlist a number of stations that were not commonplace to a regular job seeker. The broad range of options, plus the apparent effort to avoid the most easily accessible stations, suggested to us a potential for individualization in career development. The staff was also making an effort to interlace academic subjects with career exploration activities. The newly designed Cross Reference Catalog was used in the process of translating program profiles into specific activities that tie together in-house learning resources and experience site learning guides. The catalog attempted to display ways that academic activities were encountered and related to job site activities and to suggest how instructional objectives may be pursued on specific sites. A fully developed interlocking system requires almost continual job site analysis, a task that is never entirely finished.

Finally, there were three options available to students in selecting a counseling approach. These were the counseling/guidance specialist, counselor/coordinators and learning coordinators. Because some of these personnel are untrained counselors, albeit sensitive to student needs, an ongoing program of staff training and development is essential to continuously improve this aspect of student service options.

Mountain Plains

Options were available to students in the selection of training curricula and in the area of counseling at Mountain Plains.

The curricular options in career training were office education,

food services, lodging services, mobility and transportation occupations, and construction and building trades occupations. They were also initiating a new service in the area of marketing and distribution, and had discontinued work that was previously offered in the area of education and social services. Within each of these categories training in a number of hierarchically arranged positions was available. The lists of these options as well as those relating to foundation education are found in Appendix A.

Within the several training areas, M.P. broke down their work by course areas, units, and performance activities within units. For each performance activity within a unit there was a lap, or learning activity package. Some performance activities had more than one lap.

It has been observed in preceding chapters that objectives based instruction should not necessarily be equated with individualized instruction, as the only individually determined variable may be rate. At Mountain Plains alternative learning strategies for the sequential objectives had not yet been established, although the development of additional activities was anticipated.

While it is felt that the project was past the point where everybody took the same thing, they were not yet at a point where the options were unlimited or even where there were several options for all objectives. However, the staff tried to make provisions for goals to be readjusted in keeping with students' interests, desires, and abilities. Students had many options of programs when they first began, but once into a program they were allowed only three plan changes. A plan change was indicated as a complete change of goals -- for example, moving from a lubrication mechanic

to a food service worker. It would not necessarily be a goal change to move from a lubrication specialist to some other kind of automotive repair work.

In a preceding section it was also noted that students had four counseling options in this program: group, with or without spouse, or one-to-one, with or without spouse.

6. Optimize Growth

The term suggests that a program must assist each student in achieving maximal academic objectives, in expanding interests and exploring a variety of them, and in selecting personal goals which will provide the individual with maximal opportunities upon exit from the program. This component of our definition is more accurately a product or outcome of the program experience. While it relates in part to student achievement as measured against some standardized criteria, it is also largely an estimate of students' perceptions of personal growth resulting from the program. Longitudinal follow-up studies of a program will yield additional data that may be collected and reported by the project in the future. In our review, we did not obtain such information. We did, however, interview a sample of participating students in order to determine their perceptions of whether the program allowed them opportunities to grow and develop their personal and career decision-making skills. Some of their reactions to the program are reported below.

RBS

Students of the Research for Better Schools Academy for Ca
Education ranged in age from 15 to 19 and in grades from 10 to 1
This differed from AEL where all students were Seniors and from
Mountain Plains where the students were mainly adults.

As mentioned earlier, some students in the Academy, in add
to taking courses within the facility, took courses at Olney Hig
School, a racially balanced high school with a large number of s
who might qualify for the academic program. At Olney, EBCE stud
take the courses not offered at the Academy, and if time permits
could participate in some extra-curricular activities. In addit
they spent approximately 3 hours a week at the Academy for Math,
English and 2 hours in group guidance seminars. They also spent
full day a week (6 instructional hours) at an employer site for
purpose of exploration.

Regular Olney (non-Academy) students attended classes from
8:15 a.m. to 1:15 p.m. each day.

RBS-Academy students attended classes usually until 4:00 or
p.m., while some were engaged in career exploration in the eveni
This inequity caused some friction and concern among the Academy
students and was often mentioned during the student interviews,
although no question directly sought information concerning that
matter.

In review of the student responses to the question "What wa
major reason for enrolling to RBS?," the most often mentioned pl
were listed. As indicated eleven of the 15 students were seeki
career exploration. However, the next most commonly mentioned
reason (4 out of 15) was dissatisfaction with former schools.

Most often mentioned reasons for enrolling:

Abbreviated Reasons	Number of Students out of 15
Career Exploration	11
Did not like former school	4
Curiosity about program	3
Wanted more freedom	2
To learn at own speed	2
Program offered a lot of different things	2

The next two questions dealt with the prior thoughts of the students about a career. If they had (in fact) thought about a career, what was their preference in employment? Ten of the 15 students had considered some type of employment. Three had not considered careers and three were undecided - usually divided between college, employment, or the military. Of the preferred work, eleven students leaned heavily towards professional careers including: Medicine, Art, Law, Architecture, Teaching, etc. Four others had made no decision as to the type of work they preferred.

When asked if and how they were assisted in the Career Exploration, twelve interviewees indicated they had been positively assisted by their counselors or advisors, while three noted that they felt the counselors were of no help. Some students expressed a preference for the on-site "more available" counselors of the 1972-73 school year, than the sub-contracted, separately housed Chamber of Commerce counselors of the 1973-74 school year.

Thirteen students agreed that they were offered alternatives by citing the fact that they were required to do exploration in various clusters. The two negative responses were based on the fact

that preferred clusters (for students 1 and 15) had either been decided for them or closed.

Asked whether they made their own decisions as to what would be explored, nine responded positively while four, in answering negatively, cited that decisions were made according to available clusters and weren't really their own. Two students gave qualifying answers of "yes and no" and "depending . . ."

Question seven was asked to have them delineate the types of staff who were most helpful. Students had a tendency to compare the counselors of the 1972-73 school year with those of 1973-74. Seven students definitely preferred the 72-73 counselors to those of this year. Most often mentioned was their unavailability in that they did not have offices at the Academy. Five students felt that all the counselors had been helpful. Two felt that the counselors of this year were helpful and "alright, if you can get to them."

Students were almost evenly divided in responding whether they had changed directions in job preference as the result of career exploration. Six indicated change, while two others offered that they y are considering the change. Seven indicated they had not changed job preferences. Of those changing, many indicated a type of gratitude at having had an opportunity to explore their program before any final decisions were necessary. For example, students six and eleven had indicated preferences in medicine where preparation requires much time and money. As a result of exploration at one of the Philadelphia hospitals, one student, who fainted, was considering another health field while the other had selected accounting as a result of exploration in a bank through a totally different cluster. A student, who had not changed career directions indicated her appreciation for the program

in that exploration helped her confirm her thoughts about being a psychologist.

A majority of the interviewees felt they had had adequate opportunities for exploration; sufficient community resources were available and career exploration opportunities were suitable to their needs (questions 9, 10, and 11). In responding to the item concerning an adequate opportunity for exploration, ten agreed they had such an opportunity, four disagreed, while one was undecided. It should be noted that student no. 1, in responding negatively indicated he felt there were interesting programs, but insufficient time. Regarding the sufficiency of community resources, nine students felt that specialization programs established for them had met individual needs. All but one of the fifteen students felt that the career exploration was suitable to their needs.

Question twelve sought to establish whether students felt they had been placed in any employer site without preparation for it. Nine stated that this had not been the case for them, while the remaining six indicated they felt ill-prepared when placed in a cluster which they did not select, but which was available after their own choice had been closed.

Item 13 was directed specifically to minority and female students. Of the thirteen qualified to answer, eleven believed that minorities and females did not have the complete range of choices in career exploration, although some indicated that nothing had been done to them personally. One student observed that there had been "no exposure to black leaders or executives."

AEL

In an effort to ascertain student opinion of the AEL-EBCE program, a 13 item interview instrument was designed to delineate those perceptions as mentioned above. (A copy of the interview form and student responses are found in Appendix B.)

Because of the limited time available, six students, three male, three female, all age 17 and seniors were randomly selected from various areas in the Learning Center. Each student was interviewed separately for a period of one to one and a half hours. During that period, all students responded to the first twelve questions of the form. Question 13, specifically for minority or female students, dealt with their perceptions of the program in relation to special treatment or teaching. In addition, upon request of some staff, the students were asked "Given the experience you've had, would you return to this program, if it were possible?"

In terms of the program objectives in optimizing student growth, the students, representing approximately one-seventh of the student population, indicated most objectives were being met.

Although there were varied reasons for entering the program (see Appendix B, Table A, question no. 1), most described a process of individualized exploration close to the program's objectives. Whether or not they had preconceptions about a career (question 2), the students, with the assistance of their Learning Coordinators, identified a work preference (question 3) and began to set up an individualized career exploration program selecting employer sites which might in some way be related to the area they chose (question or item 4). It can be noted that, with the exception of the fifth student who preferred farming, all were able to get placements in areas specifically

related to their preferences. The fifth student repeatedly indicated displeasure in the fact that those few positions related to farming were with the State Department of Agriculture where placement was difficult because few positions were open. This condition caused the student to leave the program approximately a week after the interview. The third and fourth students, while pursuing specific placements indicated decisions to initiate some "open exploration" which resulted in selection of a placement either remotely related to the work preference or not related at all (e.g. the third student's third placement in a mortuary, though his preference was electricity). It was later explained by a learning coordinator that there was a remote relationship in that the student, who aspired to be an independent electrical contractor, needed experience in small firm bookkeeping and "open exploration" of such a facility was encouraged.

Question 5 revealed that, in both the negative and the positive responses, the students felt that they had control of their own programming as substantiated in item 6. Even those students who answered "no" indicated that they had the choices, and they were permitted "to make their own decisions" while no one tried "to change their mind." However, the second student did indicate her Kuder indicated high interest in physical therapy but neither she nor her coordinator had (by interview time) sought any alternatives in that area.

Item 6 sought information as to whether the students' choices and placements were their own final decisions, to which each emphatically responded positively that they felt they had the "final decision" in each choice making option, but that the Learning Coordinators and the staff were "all helpful" in facilitating an easy transition into and through the program.

In consideration of "changing directions" in job exploration (question 8) only two students had "considered" a change. Student number 3 is now considering work in a mortuary, while student number 4 is now "leaning towards sales" rather than journalism.

Questions 9, 10, 11, and 12 dealt with the opportunities, the sufficiency, and the suitability of the program or various phases thereof. Students indicated they felt there was an adequate opportunity for exploration of various career possibilities, although five of the six students felt there were not sufficient community resources available. Only one student felt that the areas of exploration were not suitable to her needs. As indicated by student number 5, she desired some exploration in the area of farming. The only related exploration sites available were the Department of Agriculture slots, which seemed to remain full. Therefore, exploration was with Legal Aid, the School for the Mentally Retarded and the Non-Graded Elementary School. Some exploration might have been with the Forestry and Parks service but that area was closed to females because of various safety considerations. Because of the lack of exploratory programs for this student, she left the program that next week as she had planned for some time prior to the interview.

Only two interviewees felt they had been placed in job exploration areas where they had no adequate preparation or background. Student number 3 felt he had not been prepared for placement in exploration at the mortuary. As related above, student 5 did not feel prepared for any of the three areas and felt none of them offered her any real choice to explore what she really wanted.

Question 13, aimed at checking on the possibilities of minority tracking, was asked only of minorities and females. Of the three females, two felt that some program options were closed to them because of their sex. Mentioned specifically were some areas of police work and the forestry and parks areas.

Of the six students interviewed, all but student 5 answered the noninstrument question positively that they would return to the program if given the opportunity to have a second year of exploration.

Mountain Plains

Mountain Plains participants were unique from participants in the other projects in that they were residents of the facility and they were adults, in age, maturity, family and social status. Most were married with families. Where participants of the EBCE projects are still in high school and have not had the full experience of the world of work, many Mountain Plains participants had been involved in a variety of jobs and programs. Therefore, the intensity of these participants, attempting to restructure their lives, is more acute.

To get some student opinions on the Mountain Plains program, its strengths and its weaknesses, two participants were interviewed. Both represented a unique facet of student life.

One student, the president of the MOWINDS Council (a student/community organization using an acronym consisting of the initials of the six states of the region served) had been in the program since April 1973 (approximately seven months). He was pursuing a validation in drafting and indicated that he felt he had control of most of the choices he made during his career exploration. Upon completion, he planned to go into architectural drafting.

The second student was one of the first female students to take drafting. Upon entry into the program, her tests showed that she could explore any area of her choice. With the decision up to her, this participant/head of household discussed choices with her instructors and counselors and finally opted to go for a double validation in office education and drafting. Within seven months, she had already progressed up the career opportunities ladder of Office Education by moving from an accounting clerk to a bookkeeper. It was her intention to return to her home state moving into a drafting position.

In the discussion of the program, both students concurred that the Mountain Plains project had been beneficial for them. Both cited, "the freedom to explore, the individualized approach and the general instructional staff" as being the positive points of the program. The male participant said he felt most of the residents thought they were receiving an "outstanding education and program." His own satisfaction with the program was that it provided a "more scientific on-the-job training combining the best of instruction with the best work experience environment where the pressure of losing a job before adjustment was not as great."

The major needs of the program cited were:

(1) Better screening and selection of students - both participants agreed that this was an acute problem in consideration of the number of program non-completers. "Out of my starting group, eight of us were really motivated, two weren't motivated at all, and four others left the program within the first few months," the female student indicated.

(2) Increased input on the behalf of program participants. Although there is the MOWIND'S Council, the participants said that

most students feel they have no real say in the overall program. "Students have little time to get involved in any outside activities," according to the MOWINDS president.

(3) Better job placement possibilities on completion - Even though some students had received "ideal" job positions, it was felt that some states needed additional field workers to identify better job possibilities and to assure successful placement.

(4) Improved counseling and peer-group support programs. A major concern of MOWINDS is community action and involvement with an "improved personal problem counseling system." The program might have increased peer group support programs as a means of dealing with internal family or community problems, according to the participant/president.

Both reiterated their support for the program and indicated they felt that they represented most students' attitudes toward the program. Time did not permit a more extensive interview of students at the facility, nor a follow-up of the non-completers.

A Discussion of Tracking Relative to the Three Projects

An attempt has been made to separate the concept of tracking from individualization by noting initially that they are not bi-polar ends of the same continuum. It has also been observed that the most appropriately individualized program may effectively identify a student's needs, desires, interests, and abilities and place him into a single or narrow class of activity that is consonant with his specifications. One description of tracking suggested was the image of tracks in a switchyard as opposed to a single expanse stretching out across the Dakota prairielands. In the switchyard image, tracks are only short lengths leading to junctures where change may occur and new components may be added to create a whole mechanism - the complete and optimally prepared student. In Chapter IV several observations were posited as possible evidence of tracking. In this concluding section of the paper, questions relating to these tracking concepts will be posed and the functioning of three projects in reference to the questions will be discussed.

Question 1:

Does the program regularly train disadvantaged people, women, and/or minorities for lower levels in the job hierarchy and rarely for the higher levels?

RBS and AEL

Both of the EBCE programs are primarily aimed at career exploration as differentiated from specialization and training. The exploration opportunities, as has been noted, appeared open to all and were limited only by the availability of a specific site to accept a certain number of students at one time. Further, students were

expected to explore a variety of sites and jobs within those sites and not concentrate on a single job. If a student showed high interest in a career cluster area, he was urged to learn more about the wide range of jobs available within that cluster. In the RBS program, the student was introduced to a range of jobs on every site he/she visited. The continuous change process at both RBS and AEL made it difficult for any student to stay an unusually long time on a single job. We found no evidence, for example, that any student had remained at a single site for career exploration for longer than ten weeks. A much shorter period - three to four weeks - was the more typical exploration time.

Within the job sites explored, we found generally open choice available to females and minorities. Agreement made with employers specified that students exploring a given site would not be limited by sex or racial characteristics. We felt that the EBCE programs made special effort to maintain open access and that employers accepted this position. Yet, it must be noted that social and cultural factors still appeared to influence both the choice and the amount of participation in certain areas. An example cited to us was the tendency for the construction cluster at RBS to receive a large proportion of black males. At AEL it was reported that while one employer, the city police department, was open to both sexes, they were reluctant to have females ride in squad cars in the evening, though males were allowed to. The job coordinator had discussed the matter and pointed out the discriminatory nature of this policy.

At AEL we compared our sample of 24 present participants, which included one minority person, with eight black students who were

either in the program or who were enrolled last year. Our principal concern was whether there was any difference in the numbers or types of job stations which our sample explored as compared to these eight minority students. We have noted that the number of sites explored by our sample over a sixteen week period ranged from 2 to 5 with an average of 3.9. The five black students for whom 16 week data was available had from 3 to 5 different career explorations, with an average of 4.2. The remaining three black students who were in the program 36 weeks during 1972-73 had 6, 6, and 8 job explorations. Such figures reflect no significant differences between the two samples.

We also compared the cluster areas in which these black students participated as compared to all students who have been in the AEL program to date. Minority students did not participate in two cluster areas, Construction and Agriculture and Natural Resources. In 1972-73 there were only five of each of these two types of sites participating in the program. Only two students explored a construction employer site in 1972-73 and thirteen explored sites related to agriculture and natural resources. Of the five sites in the latter cluster, four of them were state or county agencies. The opportunity for minority group involvement in construction areas may be increased with the addition of 18 unions during 1973-74, at least 11 of which involve the construction trades. During our observations we found no evidence of attempts to counsel or program minority students out of and away from these cluster areas. It was our opinion that these student programs, which were so predominantly the result of student choice and interest, did not reflect an attempt to assign students on racial bases.

In the case of women participants at AEL, the data suggested several areas of heavier involvement. For example, business and office, public service, and personal services occupations were heavily represented. But, not surprisingly, there were 31, 31, and 24 stations, respectively, that participated in these cluster areas during 1972-73. A more average number of sites participated in the health cluster (14) and the students for this area were primarily female. Most of the latter job titles explored were in nursing, medical technology, and medical or dental receptionist. Each of these has been most frequently identified in our culture with female occupations.

Mountain Plains

As we noted in an earlier section on "Needs, Interests, and Aspirations," career choices by women at Mountain Plains were most frequently in the office education cluster. Only a very few women chose mobility and transportation occupations or construction and building trades occupations. Food and lodging services attracted both sexes. Several factors were cited that confound reasons for the kinds of choices made:

a. Attitudes of the marital partner. Usually husbands did not want their wives in career areas generally reserved for males, they did not want wives in the same area in which they were enrolled, and they were reluctant to see wives in job classifications that paid more than they could earn, especially if it were in the same cluster area.

b. Limited babysitter service. This made it difficult for women to spend as much time in the training program and, therefore,

to qualify at successively higher levels in some of the career clusters.

c. Availability of jobs at their home sites. If the studen feels there is a limited job market for a given specialt in the town to which they intend to return, the special- ization level to which she aspires may be lowered.

We also noted earlier the Mountain Plains concern for minori in this instance, native Americans or Indians. Nearly one-fourth of entering students are Indians, but a larger proportion of resi and non-completers have been from this group. In order to counte this trend, special attempts had been made to provide counseling and peer group support for Indian students and families. The dif culty of Indian wives in adjusting to different living circumstan was cited. In their home surroundings they are part of an extend family, and at Mountain Plans that is completely lacking. Some w have returned to homes on the reservation, often forcing or influ ing their husbands to resign the project. Efforts to retain thes minority persons have to be directed at improving conditions for and the family constellation. The Indian union group was one suc effort.

We found no evidence of exclusion from M.P. occupational pro grams on the basis of race or sex. It is true, nevertheless, tha entry into various specialization areas requires minimal basic sk This results in some persons spending longer in foundation educat or entering occupational areas at lower levels of job hierarchy. skills improve, students may specialize in jobs higher on a caree ladder. It is generally accepted that, as a group, blacks and In have shown poorer basic skills preparation so that initial choice

at M.P. may be limited by achievement in the basic skills. Recognition of this problem has resulted in continuing efforts to improve Foundation Education at M.P.

Student options are always limited by temporal and financial constraints. These practical limitations have affected the number and types of choices at M. P. to semi-skilled and skilled jobs - at a maximum, semi-professional level. Students are apprised of these options prior to entry. These options, except limited by basic skills, were no more or less available for special groups than for the majority.

Our initial question related to the "disadvantaged" as well as to women and minorities. By definition, the students at M. P. are economically disadvantaged, since that is one of the key selection criteria. Consequently, there was no programmatic discrimination to the "disadvantaged" once they joined the M.P. program.

Question 2: Does the program employ limited assessment procedures which are not sensitive reflections of individual strengths and weaknesses?

In the preceding discussion of assessment procedures, we noted that each of the projects used multiple strategies and instruments. Each had some technique for assessing interests. Further, each program had procedures for remediating basic skill deficiencies and for providing a means for high school graduation either through receipt of a diploma or the GED equivalency certificate. Continuing assessment was described in each project as an ongoing activity. In addition, M.P. made a special provision for "challenging" wherein

a student could bypass some of the instructional sequence by demonstrating competency or proficiency through a test.

RBS and AEL

A commonly expressed definition of tracking is that it is the practice of placing students into a program based on a narrow band of variables such as achievement and I.Q. scores. We found no evidence that these tests were used either to place or to counsel students into any program area. The achievement and I.Q. test information which we examined at RBS was used primarily by the project's research staff for reporting and research purposes rather than by teachers or counseling/coordinators in the exploration or specialization planning phase. Further, it was not possible to determine trends in the career exploration patterns based on ability or achievement data. It was indicated that certain clusters had appeal to identifiable groups, but that seemed to have more to do with factors such as peer or societal influences. For example, the apparel industry primarily attracted females, despite RBS' attempts to bring in male representatives from the industry during student orientation activities. To date, only two boys had selected this option. The underlying influences that promote such career exploration choices appeared unrelated to any direct intervention by the program.

Placement by aptitude suggests that an attempt be made to measure aptitudes. That was done through administration of Self-Directed Search, though it would be somewhat questionable as to whether that instrument is an aptitude test or a counseling inventory. At RBS, we believe it was primarily used as a tool to get students to

examine their career interests. We found no evidence that expression of interests in specific careers was used either for placement or to influence exploration or specialization decisions.

Similarly, at AEL we found no evidence that achievement or I.Q. scores were used as the sole basis for program placement. Scores on I.Q. tests were not available for many students, and the ones we did note in the student records were often five or more years old. Achievement tests, given in the first weeks of the program, were not scored and returned for some 4 to 6 weeks and appeared to have little effect on a program profile when they were returned. Other broad-band or diagnostic measures were not employed, except for measures of career preference. They, too, seemed little related to individual program formulation, except for an Occupational Situation Demands Checklist that was beginning to be used to determine student's feelings about various job situations. Such a checklist related to expressed student interests, which in turn led to identification of worker trait groups and specific jobs which were consistent with those traits. Other significant inputs to a program profile were the courses required by the country high school for graduation. In both instances, we observed that the student program was not prescribed by EBCE personnel, but rather by student interests and graduation needs imposed by state or local district requirements.

Mountain Plains

We have listed some of the assessment instruments and methods of the M.P. project. Every measure had specific and limited purposes and none was intended nor used as single decision factor in program

planning. Both formal and informal procedures were employed by four major program components in order to assess student interests and to base program modification on a variety of information sources.

Question 3:

Does the program have only limited counseling procedures, or do the counseling procedures reinforce limited aspirations?

Each of the projects visited has developed extensive descriptions of their counseling procedures as a part of operational plan submissions to NIE. It is not our purpose to reiterate those procedures here except to note that prior to site visits, these plans were reviewed, and previous sections have noted discrepancies and congruencies between plans and observed procedures.

A basic philosophical question arises when one talks of "raising" career aspirations. What are improved aspirations and by whose standards? The lack of concensus on this question related to the kinds of counseling procedures the projects followed.

RBS and AEL

The general position that was taken was that an "aspiration-raising" program was neither essential nor desirable. By providing many job exploration activities in a variety of cluster areas, it was indicated that students could obtain sufficient background information on which to make career decisions. While no special procedures were noted to raise aspirational level, the observers noted no trends in the activities pursued by minorities that suggested limitations on job levels. With women, it has been noted

that they have tended to select from areas usually associated with females, but a wide range of choices within a category were explored, or available for exploration.

Student perceptions of the impact and sensitivity of the counseling procedures have been discussed and some are shown in Appendix B.

Mountain Plains

An important aspect of the M.P. program was an attempt to establish congruity between abilities and aspirations. Many entering students had unrealistic expectations for jobs that required professional level preparation--doctors, lawyers, etc. The project had to work with students to develop realistic plans within the options available in their program. In addition, the project provided counseling at two levels--personal needs and career needs and decision-making. Counseling and guidance included assistance in career selection, job application, techniques in obtaining, holding, and advancing within a career.

Question 4:

Does the program have any processes for accomodating culturally different values?

RBS and AEL

No special accomodations were observed, but it was apparent that varying values and points of view were considered at RBS. Special attempts were made in the selection process to enroll a balance of black and white students. Several key staff positions were held by blacks, though not in equal proportion to the black students in the program.

Relatively few black students are enrolled in the AEL program. There are proportionally far fewer black students in the Kanawha County schools from which AEL draws.

Mountain Plains

A very real need for accomodating to minority values was observed at M.P. They have instituted an Indian Union to assist wives and families in adjusting to the project. They allow for periodic home visits for students, which allows some to maintain family ties back home. (This has had some negative results when students resign the project and don't return. M.P. employed one Indian woman counselor that the observers felt was particularly effective in a group counseling session. A key administrative position had been filled by a person of Indian background.

Question 5:

Does the program have adequate pre-entry counseling to determine program "fit" with client needs?

RBS and AEL

Both EBCE programs experienced low dropout rates from the program. In the first year, RBS terminated a few students for non-attendance. AEL retention through the first year and a half was very high, though it should be remembered that AEL students were in their last year of high school and may be able to realize the nearer-term advantages of remaining through high school completion than may the younger group of students accepted by RBS.

Prior to entry, both projects conduct orientation programs for students and their parents in which they explain program options and procedures. Interviews with students at AEL indicated, with one exception, satisfaction with the offerings. The program criticisms heard by RBS students came more often from those who were in their second year. They criticized the more limited supplemental program and the change in counseling procedures as varying from what they had been led to expect in the first year. Some students from Olney High School felt the career education program required more work of them than of their classmates who remained full-time at Olney

Mountain Plains

Students received information about the program from the Outreach staff in each state and at the site from the M.P. staff during the first weeks of orientation.

Resignees and non-completers continue to be a concern of the M.P. project. Since there is a considerable investment of time and money in selecting, relocating, reeducating, and placing students, it becomes a matter of concern that people leave before completion. While some resign very early, others stay for a longer term but leave before validating or demonstrating competency in their area of specialization. The observers felt that the program options were consistent with area and student needs, but that social and cultural adjustment problems were among the primary reasons for resignation. These are as difficult to define as they are to identify during the student selection process.

Question 6:

Does the program focus on the needs of society (e.g., current labor market shortages) to the exclusion of the needs of the individual?

RBS and AEL

At the EBCE projects, students were encouraged to explore a variety of sites including compiling information about work demands and opportunities with the job area. The focus appeared to be on having the student explore his personal interests in a specific career, rather than limiting his interests by labor market projections. That is not to say that those projections are unimportant or that they should be ignored. On the contrary, the projects each wanted students to obtain such information in order to have a fuller understanding of career choices available to them.

Mountain Plains

M.P. has had to deal directly with this issue because they are preparing students directly for labor market entry. The career clusters offered at M.P. were originally based on needs and opportunities within the six state region. Because of government cutbacks in certain social service and educational funding, M.P. discontinued its program to train social service workers. A new cluster in marketing was planned as an alternative, and its selection was at least partially based on the labor market potential. While student interests have influenced programmatic decisions and planning, the selection of career areas was, for the most part, divorced from the student input process.

In general, the observers were able to note no instances of tracking as a project imposed result. That is, there were none of the obvious attempts to consciously place students, especially women and minorities in learning situations because of pre-conceived sex- or racially-based stereotypes. On the other hand, a number of instances of tracking could be cited which were created by external forces. We have observed that among the causes of tracking are those practices resulting from:

a. Cultural influences

b. Socioeconomic influences

c. Client characteristics

d. Financial and temporal limitations

Since these factors will always be present, and are largely out of the control of operators of programs they can accomodate to them but seldom can change them. Accomodation can take place if program staff are aware of these forces and the role they play in individual student planning. On most counts, the observers would give high marks to the program staff we interviewed for their sensitivity to these issues.

CHAPTER VI

SUMMARY AND CONCLUSIONS

This report resulted from a request by the National Institute of Education's Career Education Program to examine individualized instructional practices and potential tracking in projects which it had funded, especially those engaged in direct delivery of instructional services. The initial research task was to examine the literature to determine a definition of individualized instruction and tracking that would serve as a basis for subsequent assessment. At that stage of work, an assumption was made that individualized instruction was a necessary element to programs that intended to provide equal educational opportunities to all students. The first chapter discussed the historical background and rationale for this position. Sample definitions delineating the components of individualized instruction were presented.

In Chapter II, some of the most basic factors in individualized instruction were discussed along with additional components that added to the comprehensiveness of the model. The discussion was organized in a chronological manner by reporting the sequential steps required to plan, develop, operate, and assess an individualized program. That sequence began with definition of the program to be individualized and development of a series of instructional objectives. At the next stage, focus was placed on the diagnosis of student needs as critical preparation for instructional delivery. Issues of whether the diagnosis should focus on student strengths

or weaknesses were mentioned. The involvement of students and parents in the pre-entry goal-setting process was noted. It is the operational aspects of individualized instruction that are most frequently emphasized, though it was our position that planning and assessment of outcomes are of equal significance in the process. We noted a lack of innovativeness in many reported programs, most of which attempted to employ prescriptive, performance-based programmed learning materials as a primary instructional option. Some programs emphasized a technological approach using computer assisted learning, audio-visual instruction and learning packets. We noted that criticism of such programs often centered on their lack of interpersonal interaction as a learning tool. A number of writers stressed the importance of student involvement in the instructional management process. That is, the student has a need to be informed of his/her progress, understand the expectations of the program, and participate in managing a study schedule. We cited the importance, in the opinions of some writers, of physical facilities sufficient in size which also allow for a variety of activities to take place at any given time as a key component. As a major program outcome or product of individualized instruction, we reported the need for a systematic process for identifying and analyzing instructional content, for establishing performance goals through a variety of teaching-learning approaches, and for evaluating the program. In the area of student outcomes, we listed as principal ingredients of individualization the diagnostic and prescriptive procedures occurring throughout the course of work.

Chapter III was a brief statement of several recurring themes found in the literature on individualized instruction. Those special issues included the role of counseling in individualized instruction, problems in evaluations of such programs, and some of the most oft-heard criticisms of individualized instruction. The discussion of counseling focused, in part, on the needs of the disadvantaged for individualized programs that would improve their educational and economic status. Criticisms of individualized instruction related to the overemphasis on technology, and on "pacing", "rate", and "sequence", the ignoring of interpersonal relationships, the lack of student involvement in selection of goals, and the use of arbitrary, sometimes unrelated evaluation criteria for measuring learning progress.

A definition of individualized instruction as a basis for program review and assessment was presented in Chapter IV. That definition stated that:

> A program of individualized instruction is a systematic procedure for determining, on an ongoing basis, client needs, interests, and aspirations, and for providing options to the client which will optimize growth in each and all of these three areas.

The terms underlined in the above definition were discussed in regard to their contribution to a total concept of individualized instruction. A final section of Chapter IV dealt with the relationship of tracking to individualized instruction. We discussed some of the negative inferences which tracking implies, as well as some

positive results that could be attributed to appropriate tracking. Barriers or confounding problems in eliminating tracking which derives from sex, racial, or socioeconomic variables were noted. Though we found no single, precise method for assessing the degree of student tracking in programs, we listed six observable clues that could be employed in estimating the degree of tracking. Those clues related to the bases on which occupational training areas are selected, the extensiveness of student diagnoses, the nature of counseling services, the accomodation to culturally different values, the degree of program fit to client needs, and the importance placed on individual as opposed to societal needs.

Chapter V was an application of the conceptual model to three career education programs. We attempted to relate the key elements of our definition of individualized instruction to activities and programs as observed in November 1973 through January 1974 in the NIE-funded programs at Philadelphia (RBS), Charleston, West Virginia (AEL), and Glasgow, Montana (MP). After a brief description of each project, we examined the elements of (1) systematic procedure, (2) determination of skills and abilities of students, (3) ongoing assessment, (4) needs, interests and aspirations of students and (5) provision of options in the instructional program. The sixth element, optimizing student growth, is actually a kind of outcome measure, and given the time and the extent of our observations, could only be reported from the point of view of student satisfaction in the career education program.

We were primarily concerned with the existence of, rather than the degree or quality of, the elements of an individualized instructional program. However, it was inevitable that the observers would note strengths of some projects as compared with others in meeting certain of the criteria suggested by our definition.

The last section of Chapter V posed six questions related to the existence of tracking and discussed each project in relation to the questions. Obvious examples of tracking in a negative or pejorative sense were not discovered though we noted the existence of certain types of tracking that appeared to be external to the career education programs and outside their sphere of influence. We referred to:

1. Sociocultural tracking in which peer group and cultural influences affect the kinds of occupational interests and training decisions made by students.
2. Economic influences in which financial limitations on training and occupational preparation have affected earlier and present career decisions.
3. Client characteristics in which the student or the employer makes training or hiring judgments based on an assumed fitness for a job. For example, women may not choose preparation in automotive or transportation related careers because of the common stereotype that the jobs in that area require great physical strength, "native" mechanical aptitude, or other sometimes false assumptions.

4. Program limitations in which a student selects from a list of courses which is restricted by funding, staff qualifications, or other factors not fully within the power of a program to change.

Each of the above may result in a kind of student tracking, though little specific action on the part of a career education program could change the selection process of occupational preparation or placement.

Systematic procedure was defined as a specific provision for individualized diagnosis, counseling, planned activities, and evaluation. Each of the three programs had a process for selecting, entering, and planning student programs. Personalization of the educational program occurred in each. At RBS, we cited the orderly procedure available for basic skills instruction through its use of Individualized Learning for Adults (ILA). AEL had just completed and introduced a system for diagnosis and student decision-making that was highly promising. We also noted that AEL had planned exploration activities in which students related their experiences on an employer site to specific academic requirements or expectations. MP had the most extensive provisions for student program development, because this project had different objectives. One of their goals was to train students in an area of occupational specialization as opposed to the exploration focus of the other two projects. As a result, MP had to provide personal and family counseling, career guidance, basic skills education, and occupational training. We observed that this task was more complex and required more time, staff, and cost than other programs. Developmental efforts at MP that were well

advanced were occupational training and personal and family counseling, but neither were "finished" systems. Career guidance and foundation education were undergoing changes, with one of the major tasks of the latter to help define or determine levels of basic skills essential to success in various career specialties. A new director of the Career Guidance component was developing a planned approach to assist students in career decision making. While many components of the MP system could be exported, it was our assessment that developmental efforts in this comprehensive program should and would continue, even though replicable elements were identifiable.

A key element of the ILA system at RBS was an assessment procedure to define each student's achievement in the basic skills of reading and math. This was not only a complete, but also a prescriptive, system which provided an individual point of entry for students into the basic skills program and sequential materials through five areas within reading and eight areas within math. Assessment or the determination of individual status was considered a primary task for counselors within an individualized program. Processes for self- and counselor assessment were being developed at RBS, but we noted that there appeared to be no strategy by which regular assessment procedures led to career exploration placement decisions. The physical separation of counselors, who were housed several blocks from the Academy for Career Education was cited as a deterrent to effective utilization of the counselors in student diagnoses and program planning.

AEL's procedures at the time of our observation were being modified and a new system for student assessment and planning was being

initiated. The basic logic of the new system appeared promising and sensitive to identifying student aptitudes and career choices as a basis for program planning. We cited at AEL the general avoidance of global assessment measures such as I.Q. tests or achievement batteries as principal program determinants and the practice of student involvement in choosing their career exploration sites.

Two kinds of counselor input - personal and family problem solving and career guidance - existed at MP. General aptitude tests and vocational interest surveys were used in initial assessment activities for entering students. Other formal procedures for determining student needs included administration of questionnaires, personality inventories, and problems checklists.

Recurring, ongoing assessment which recognizes the need to continuously examine student progress and placement is a third element of our definition of individualized instruction. The ILA system used at RBS met this requirement through regular monitoring and evaluation of student learning. Ongoing evaluation of student progress in supplementary skills or career exploration was not evident except at the end of student participation. Students who entered a specific exploration cluster generally received the same type of program over a twelve week period without programmatic adjustments through the course of the exploration to serve individual needs. The lack of close student-counselor interaction was again cited as a constraint to ongoing assessment. The frequency of program changes and interventions was regarded as a strength of AEL's career exploration program. Usually students changed exploration sites every three weeks so that career education activity was under regular review. A specified process

for academic assessment was not seen at AEL. A key to ongoing assessment at MP was a periodic review of the appropriateness of occupational preparation selection. Students helped set instructional objectives and worked with the career guidance and/or counseling sections to resolve problems related to achievement of objectives.

The element of needs, interests, and aspirations placed importance on the need to identify academic or skills problems and to require remedial teaching where warranted. RBS's procedure was particularly sensitive to this issue in that they required all students whose skills were below ninth grade level to participate in the basic skills program. RBS was said to view the entire EBCE program as a mechanism for altering student aspirations, but without separate course work or special indoctrination. A philosophical problem - to whose "aspirational level" students would be raised - was discussed. AEL's lack of formal academic diagnostic procedures and absence of a requirement for students with poor basic skills to participate in a remedial program was noted. The major emphasis on student interests was a strength of its program planning activities. Further, every student was expected to select and meet periodic requirements in five concept areas (social science, natural science, mathematics, communications, and career aspirations). One way to view career aspirations is to record changes in student goals through program participation. An AEL staff member conducted a study of student scores on the Kuder Preference Test during 1972-73. The measure showed gains in maturity during the first semester of that year, but no significant changes thereafter. However, if the EBCE objective was to encourage realistic career choices, increased

aspirations may be a contradictory concept. MP's immediate task of preparing adults for the world of work required that attention be directed at identifying needs and capitalizing on student interests. Problems which confounded their task were discussed, including the presence of "program-goers," the higher dropout rate for minority persons, and the unrealistically high hopes of some students that they could gain professional level training at MP. The reluctance of male students to have their wives enter programs that would lead to skilled positions, high pay, and/or competition with men in the same jobs was discussed as a special MP problem in changing aspirational levels.

The component most frequently equated with individualized instruction is the provision of a variety of options in the areas of academic instruction, career exploration, and counseling. Each of the programs observed fared well on this criterion, for though they each had limitations, their options were extensive and were planned to be responsive to a variety of student choices. AEL had 100 different career exploration sites which represented 15 career cluster areas. The range of options provided students with activity choices that were exceptionally comprehensive and which resulted from intensive public relations and educational efforts with the employer community. MP had options in counseling, guidance, foundation education, and occupational training. The latter was the simplest to relate to the element of providing options. For example, MP had five cluster areas - office education, food services, lodging, building and construction trades, and mobil and transportation trades. There were 8, 8, 2, 12, and 15 job titles, respectively, within

these clusters for which training was available. Only three changes in a student's occupational preparation plans were allowed, partly as a discouragement to those who would intentionally prolong their stay in the program. Counseling options at MP were available and foundation education provided individualized programs in which a primary variable was rate of achievement.

The last component of our definition, optimizing growth, was discussed entirely within the context of student perceptions of each program. Appendix B provides a brief resume of student responses to a structured interview. Time limitations of the observers resulted in a too narrow sampling of reactions at MP, so that student outcomes and acceptance of that program are tenuous.

The final portion of Chapter V listed a series of questions about the concept of tracking, its relationship to individualized instruction, and its presence within the three career education programs. As noted earlier, tracking can have a positive as well as negative image. Tracking was defined as a unique entity instead of the bi-polar extreme on a continuum of total individualization to complete "non-individualization." Obvious, obtrusive evidences of tracking were not observed in the programs, though several subtle forces, often outside the projects' control, that resulted in a form of tracking were identified.

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Appendix A

PROGRAM OPTIONS -

MOUNTAIN PLAINS PROJECT

	O.E. Job Titles	Courses	Units	PAs & LAPs
A Hierarchy	File Clerk	7	17	?
	Receptionist	2	10	?
	Typist/Clerk	5	19	?
	Steno	3	58	?
	Secretary	5	25	?
	Accounting Clerk	6	25	?
	Cashier I	2	7	?
	Bookkeeper	4	15	?

LODGING

Job Titles	Units	PAs
Maid	4	?
Housekeeper	14	
Desk Clerk	13	
Night Auditor	22	

FOOD SERVICES

Job Titles	Units	PAs With All Units
Kitchen Supervisor	26	260
Pantryman	9	
Cook's Helper	7	
Cook	26 (Same as kitchen Supervisor)	
Baker	10	

BUILDING CONSTRUCTION

Job Titles	Courses	Units	LAPs within Courses
Carpenter	Rough in	8	63
	Finish		41
Cabinet Maker	Cabinet Frame Assembly	7	20
	Compon. Assembly & Finish		26
Building Maintenance	Structural	17	61
	Electrical		23
	Mechanical		49
Appliance Service	5	9	
Electric Wireman	3	5	
Electric Motor Repair	4	9	
Electronic Spec.	4	15	
Elec. Maint. Man	4	10	
Plumber	2	13	
Refrigerator Repair	3	10	
Heating & Air Conditioning	3	10	
Entry Draftsman	1	13	
Welding			
Support Course only Not a Job Title for MP training purposes	2	10	

AUTOMOTIVE

Job Titles	Courses	Units	PAs in
Lub Mechanic	13	19	
Light Duty Mechanic	11	30	
Mechanics Helper	12	25	
Engine Repair Mechanic	6	18	
Transmission Mechanic	5	17	
Auto Air Condition Mechanic	6	17	
Tune-up Mechanic	10	31	
Brake Mechanic	5	16	
Front End Mechanic	5	17	
General Mechanic	12	60	
Basic Small Engine Repair	1	23	
Chainsaw	1	5	Each one requires Plus all of the 23 in Basic Small Engine Repair
Snowmobile	1	5	
Motorcycle	1	5	
O.B. Engines	1	5	

FOUNDATION EDUCATION

No Job Titles	Courses	Units
Course Area		
Basic Common Skills	10	All at grade levels within an 01-16 grade classification
1. Phonetic Analysis		4
2. Struc. Analysis		7
3. Vocabulary Development		6
4. Literal Composition		5
5. Interpretive Composition		5
6. Eval. Composition		5
7. Struct. Patterns		11
8. Organ. Skills		5
9. Ref. Skills		8
10. Corres. Skills		3

Structure (Occupation-Preparation)

Cluster or Course Area	Job Titles	Units	Perf. Activities each of which has at least 1 documented procedure (LAP)
e.g.			
Office Ed.	8		?
Food Services	8		
Lodging	2		?
Building & Construction	12		
Mobil & Transportation	15		

Appendix B

Table A

AEL STUDENT RESPONSES
TO INTERVIEW QUESTIONS

Table B

RBS STUDENT RESPONSES
TO INTERVIEW QUESTIONS

TABLE A AEL STUDENT RESPONSES TO INTERVIEW QUESTIONS

	Student 1	Student 2	Student 3	Student 4	Student 5	Student 6
EX	Male	Female	Male	Male	Female	Female
GE	17	17	17	17	17	17
ERIOD WITH SCHOOL	4 months	4 months.	4 months	4 months	4 months	4 months
1. Major Reason for Enrolling	"Wanted to try something different."	"Program is more personalized and individualized."	"Wanted 'out' of the traditional classroom system. Was bored with regular school."	"Parents enrolled me in the program but I was sick of regular school."	"My brother and best friend went here and they liked it. I thought it might be exciting."	"To get away from my vice-principal."
2. Prior Thoughts About a Career	Drafting Occupation	Art	None	Air Force - Journalism	None	Psychology or Social Work
3. Identified Preferred Work	Draftsman	Book Illustrator	Electrician	Journalist	Farmer	Psychologist
4. Assistance in Exploration	Testing, orientation. Placed originally with an architect and second placement was with a real estate broker. 3rd-residential construction	Orientation. Placed with the Art Gallery; (2) ETV art and set decoration (3) AEL offices, chemical company; plastics division	Decided on "open" exploring: (1) motor cycle shop; (2) auto mechanics; (3) mortuary (4) photography with ETV.	Open exploration (1) sales division in a phone co.; (2) sales with an insurance firm (3) newspaper (4) Air National Guard	Placed in a Legal Aid program (because Dept. of Agriculture was closed; (2) School for the Mentally Retarded (3) Non-Graded Elem. School intern	Learning Coordinator suggested (1) working in physical therapy within a local hospital; (2) Adult probation; (2) School for the Retarded Children (4) Treatment Center (Psychiatric

TABLE 6.A STUDENT RESPONSES TO INTERVIEW QUESTIONS

	Student 1	Student 2	Student 3	Student 4	Student 5	Student 6
EX	Male	Female	Male	Male	Female	Female
GE	17	17	17	17	17	17
ERIOD WITH SCHOOL	4 months	4 months	4 months	4 months	4 months	4 months
5. Were you given any alternatives?	"No, they let you make your own decisions."	"No, they didn't try to change my mind." However her Kuder indicated some preference in physical therapy but this was not pursued by student or coordinator.	Yes	Yes	Yes	"No, her Kuder supported her placement.
6. Own final decision?	Yes	Yes	Yes	Yes	Yes	Yes
7. Staff members who were most helpful.	L.C. most helpful in job placements. Counselor also helpful.	"All are helpful"	"All have been helpful"	The L.C.	The L.C.	L.C. is most helpful.
8. Change directions?	No	No	Yes	Yes	No("but I felt pressured into making a decision.")	No
9. Adequate opportunity for exploration?	Yes	Yes	Yes	Yes	Yes	Yes

TABLE 6.A STUDENT RESPONSES TO INTERVIEW QUESTIONS

	Student 1	Student 2	Student 3	Student 4	Student 5	Student 6
EX	Male	Female	Male	Male	Female	Female
GE	17	17	17	17	17	17
ERIOD WITH SCHOOL	4 months	4 months.	4 months	4 months	4 months	4 months
10. Sufficient community resources?	There were some desired job sites not open	No, some companies here closed their doors.	No, but sufficient for my own exploration.	No	No	Yes
11. Career Exploration suitable to your needs?	Yes	Yes	Yes	Yes	No (very little for anyone exploring farming)	Yes
12. Placed without preparation?	No	No	Yes	No	Yes	No
13. Minority or female complete range of choices?	N/A	No, girls are not permitted in all areas of exploration with the police station.	N/A	N/A	No - see *a	Yes, quite open.
*Given experience would you return if possible?	I'd return	I'd return	I'd return	I'd return	*a "No," student left the program the next week.	I'd return

TABLE B RBS STUDENT RESPONSES TO INTERVIEW QUESTIONS

	Student 1	Student 2	Student 3	Student 4	Student 5	Student 6
SEX	Male	Female	Male	Female	Female	Male
AGE	17	17	18	17	18	17
PERIOD WITH SCHOOL	Senior	Senior	Senior	Senior	Senior	Senior
. Major Reason for Enrolling	"I was bored going to class all the time. I wanted to go into careers more. I wanted more freedom. I wanted to see what was going on."	"I wasn't set on the type of career I wanted and the school was boring and I couldn't learn at my own speed."	"The careers. Their offering different types of careers sounded pretty good. My counseler said go ahead and do it."	"I had been in a Catholic school and transferred to Penn but I did not like it and this spogram sounded good - the individualization - and I liked the idea of looking at careers and it was something different."	"The only thing about this school was the info. on a slip of paper, but I didn't like Olney so I came anyway."	"They offered a lot of different things you couldn't get at Olney. The Career Exploration, for example."
. Prior Thoughts Toward a Career	Wanted to be an artist	Hadn't thought of the type of career	A trade-type career like carpentry, plumbing a few friends that dropped out of school that got in trades.	"I didn't know whether I wanted to go to college or not."	"At first I thought I wanted to be a Spanish interpreter."	I wanted to either go in the service either into college. I didn't want to make up my mind so early
. Identified Preferred Work	Commercial Artist	Possibly medicine (brother was a chemist).	None, wanted to explore further	None	Spanish Interpreter non-law	Art College - commercial art. (Have already done some commercial art.)

TABLE B RBS STUDENT RESPONSES TO INTERVIEW QUESTIONS

	Student 1	Student 2	Student 3	Student 4	Student 5	Student 6
SEX	Male	Female	Male	Female	Female	Male
AGE	17	17	18	17	18	17
PERIOD WITH SCHOOL	Senior	Senior	Senior	Senior	Senior	Senior
4. Assistance in Exploration	"They (the advisors) told us about the whole program."	"We were assigned three advisors to help us."	"They helped in originally palcing us."	"My counseler. She really helped, we became like friends. The counselor of last year was more helpful than the one this year, they're too removed."	"My counseler helped me an awful lot, he laid out everything and made everything available. The new counselers are hard to reach."	"My counseler last year, helped me get started."
5. Were you given any alternatives?	No, the first clusters were decided for us.	"Yes, I picked the health clusters."	Yes	Yes	Yes, by taking the clusters.	"Yes, you had to take the different clusters."
6. Own final decision?	Yes	Yes	No, (took them as they came)	Most of them were except when they were filled up.	When it's filled you don't have the final say.	Yes
7. Staff members who were most helpful	"Counseler/ Coordinator. The ones we had last year were better than this year."	"I liked having the first counseler. Now they're hard to get to and the guidance program is not really necessary.	"I think we got to know the counseler much better. He's always available. He has helped set up clusters for our needs."	See question number 4	See question number 4	"Counselers, because I had a chance to see my counseler all the time last year."

TABLE B RBS STUDENT RESPONSES TO INTERVIEW QUESTIONS

	Student 1	Student 2	Student 3	Student 4	Student 5	Student 6
SEX	Male	Female	Male	Female	Female	Male
AGE	17	17	18	17	18	17
PERIOD WITH SCHOOL	Senior	Senior	Senior	Senior	Senior	Senior
8. Change directions?	"Yes. I first wanted Spanish Interpretation but after visiting a law firm and talking to friends I want law."	No	See above	"No, but I've thought about public relations in transportation."	"Yes. Wanted commercial art but is now going into aeronautical engineering with the A.F. as result of Exploration."	"Yes. I foun I wasn't interested i medicine. No it's account ing."
9. Adequate opportunity for exploration?	"No, there are a lot of fields that might be interesting but there won't be time."	Yes	"Yes, but it could be better. I haven't had a chance to operate machines."	Yes	"Yes, but I chose the government cluster and they said I couldn't have it."	"Yes, they set me up with an arti through specialization."
10. Sufficient comm community resources?	"Yes, African artist."	"No. They have trouble getting the program up with some agencies."	"For me, I don't know. Most all the people have done is stand and learn how other people work."	"They would probably be available if I needed them."	"Yes, I have a specialization program on legal aid to women jail offenders."	Yes

TABLE B RBS STUDENT RESPONSES TO INTERVIEW QUESTIONS

	Student 1	Student 2	Student 3	Student 4	Student 5	Student 6
SEX	Male	Female	Male	Female	Female	Male
AGE	17	17	18	17	18	17
PERIOD WITH SCHOOL	Senior	Senior	Senior	Senior	Senior	Senior
11. Career exploration suitable to your needs?	"Yes and No. You can learn alot here, but guidance and world at work is a duplication of effort."	Yes	"Yes, the construction cluster is suitable."	Yes (you have to do it!)	Yes, you have to do it.	Yes
12. Placed without preparation?	Yes, "If you're late and the clusters are closed and you have to take anything."	"That happens, but taking clusters I don't like may still show me something."	"Last year something similar happened. When I asked for trades, they didn't try to set up any."	"Morning clusters, you see the same thing."	No	No
13. Minority or female complete range of choices?	"Yes and No, depending on the company."	"No. that hasn't happened to me."	N/A	"No, but nothing has happened to me. But there has been no exposure to black leaders or executives."	"No, I was discriminated against at one site."	"No, but mor discriminati than program discriminati

TABLE B RBS STUDENT RESPONSES TO INTERVIEW QUESTIONS

	Student 7	Student 8	Student 9	Student 10	Student 11	Student 12
SEX	Male	Female	Male	Male	Female	Male
AGE	17	15	16	16	17	15
PERIOD WITH SCHOOL	Senior	Sophomore	Junior	Junior	Junior	Sophomore
1. Major reason for Enrolling	"I didn't like Olney at all, that was the main thing. Too many people over there, it seemed to be less hassle. (I enjoy coming here, you meet people. You get a sense of direction),	"They offered a lot of different things you couldn't get at Olney. The Career Exploration, for example."	Come to take up drafting - interested in getting into a career.	Looking for a career	You can go at your own speed.	"I was in t group at Wganer (IN= Interested Negroes) - We went to business an organizatio and I wante it to con- tinue."
2. Prior thoughts Toward a Career	No	"Yes, I want to be employed."	Drafting or work like that (took it up in high schools.)	"No, thought about it."	A Doctor, Orthopedics.	"Lawyer, bu I didn't know what I could do to be that."
3. Identified Preferred Work	Service (but that blew over)	Teacher of the retarded. (Used to babysit for a retarded child).	Architect	Same as above	Same as above	Same as abo

TABLE B RBS STUDENT RESPONSES TO INTERVIEW QUESTIONS

	Student 7	Student 8	Student 9	Student 10	Student 11	Student 12
SEX	Male	Female	Male	Male	Female	Male
AGE	17	15	16	16	17	15
PERIOD WITH SCHOOL	Senior	Sophomore	Junior	Junior	Junior	Sophomore
4. Assistance in Exploration	Did not get any assistance, the counselor wasn't helpful.	They suggested a life skills special- ization - doing volunteer work on Tuesdays and Saturdays with the handicapped and retarded students.	They didn't help. I wanted drafting, it was closed, so I had to take take transportation.	Counselors were helpful.	Counselors helped me a lot.	Counselors gave me a hand.
5. Were you given any alternatives?	"Yes, I was even given specialization in a program with Bell Telephone as an operator for information and traffic."	"Yes, they provided specialization services and	No	Yes, you have to take the clusters	Yes	Yes
6. Own final decision?	Yes	"No, getting into the government cluster wasn't my id idea."	"Sometimes, I wanted marketing, but they gave me transportation."	Yes and No	"Depending on whether you get the clusters you want."	Yes

TABLE B RBS STUDENT RESPONSES TO INTERVIEW QUESTIONS

	Student 7	Student 8	Student 9	Student 10	Student 11	Student 12
SEX	Male	Female	Male	Male	Female	Male
AGE	17	15	16	16	17	15
PERIOD WITH SCHOOL	Senior	Sophomore	Junior	Junior	Junior	Sophomore
7. Staff members who were most helpful?	"Now I know what I'm doing so I don't need the counselor's help as much as I did."	"The counselors are good. They are really helpful. They take interest in us and they're our friends."	"The counselors are all right, they've really been helpful. They've been friends."	"They're o.k."	"Helpful, but the guidance counseling class is a waste of time."	"Yes, the counselors a helpful if you can find them."
8. Change directions?	See above	"No, but I've thought about public relations in transportation."	"No, I still want drafting."	"I wanted some marketing and construction but now, I like transportation. Maybe a driver."	"Had wanted to be a doctor until I was in the operating room. - It changed my mind, but I'd still want to work in health."	No
9. Adequate opportunity for exploration?	Yes	"I don't know. I guess so."	"Not all the clusters are available when you need them."	Yes	No	No
10. Sufficient community resources?	Yes	Yes	Yes	Yes	No	No

TABLE B RBS STUDENT RESPONSES TO INTERVIEW QUESTIONS

	Student 7	Student 8	Student 9	Student 10	Student 11	Student 12
SEX	Male	Female	Male	Male	Female	Male
AGE	17	15	16	16	17	15
PERIOD WITH SCHOOL	Senior	Sophomore	Junior	Junior	Junior	Sophomore
11. Career Exploration suitable to your needs?	Yes	Yes	Yes	Yes	Yes	Yes
12. Placed without preparation?	Yes (One of the clusters)	No	No	No	Yes	No
13. Minority or femlae complete range of choices?	N/A	No	No	No	No	No

TABLE B RBS STUDENT RESPONSES TO INTERVIEW QUESTIONS

	Student 13*	Student 14*	Student 15			
SEX	Female	Female	Male			
AGE	16	17	18			
PERIOD WITH SCHOOL	Junior	Junior	Senior			
5. Were you given any alternatives?	"Yes, the clusters."	"Yes. Whether you wanted them or not."	"No. They started out with a lot of choices and then pulled back and almost nothing left. They built up a lot of false hopes."			
6. Own final decision?	Yes	Yes	Yes			
7. Staff members who were most helpful?	"It's alright but I hate the guidance class."	"It's really hard to get anything when the counselor is especially late for the classes."	"No real assistance. Counselors are worse this year than last year."			
8. Change Directions?	NO	"No, It has confirmed my thoughts."	No			

TABLE B RBS STUDENT RESPONSES TO INTERVIEW QUESTIONS

	Student 13*	Student 14*	Student 15			
SEX	Female	Female	Male			
AGE	16	17	18			
PERIOD WITH SCHOOL	Junior	Junior	Senior			
1. Major Reason for Enrolling	"They made it sound so nice. I liked the freedom (Career Education also appealed to me)."	"Curiosity and it sounded interesting."	"Interested in computer programming and wanted to see what's available. Anyway, I would probably have dropped out of regular high school."			
2. Prior thoughts Toward a Career	Nurse	Psychologist	Wants to go into the Air Force			
3. Identified Preferred Work	Same as above	Same as above	Computer Programming			
4. Assistance in Exploration	Counselor helped	Couselor was helpful and friendly.	"No one really helped, you just had to take the clusters."			

TABLE B RBS STUDENT RESPONSES TO INTERVIEW QUESTIONS

SEX	Student 13 Female	Student Female	Student 15 Male			
AGE	16	17	18			
PERIOD WITH SCHOOL	Junior	Junior	Senior			
9. Adequate opportunity for exploration?	Yes	Yes	No			
10. Sufficient community resources?	Yes	Yes	No			
11. Career Exploration suitable to your needs?	Yes	Yes	No			
12. Placed without preparation?	No	No	No			
13. Minority or female complete range of choices?	No	No	No			

Appendix C

MOUNTAIN PLAINS PARTICIPANT

SELECTION CRITERIA

SELECTION CRITERIA

Criteria Statement	Indicators and/or Measurement Technique
CRITERIA TIED TO INTERNAL OBJECTIVES	
1. No persons with mental retardation will be eligible.	1. School records and observation. If abnormalities are suspected, other sources of information include: - Mental Health Center - Red Feather Agencies - Doctors and/or Hospitals - National Assoc. of Retarded Children - Family service Agencies Condition could be verified by: - Doctor - MMPI - Other responsible agency evaluation.
2. No families of which any member has a current violent, anti-social or uncontrollable behavior problem will be acceptable.	2. Records from school, police, and courts. (See attachment 2a & 2b.)
3. Current illegal use of drugs by any family member makes the family unacceptable.	3. Police and court records. Interview with family.
4. All persons must be part of a legally constituted family, i.e. related by blood, marriage or adoption.	4. Marriage records. Interview with family (validation of common law marriage.)
5. Families with members who have alcohol problems currently severe enough to interrupt work, marriage, or social functioning will not be eligible for MP participation.	5. See 5a and 5b attached.

Criteria Statement	Indicators and/or Measurement Technique
6. No husbands/wives/parents will have a reading level below 5.0.	6. WRAT reading test.
7. No husbands/wives/parents will have a math level below 4.0.	7. WRAT math test. A score of 80 on GATB GVN is equivalent to 5.0 reading level on WRAT test.

ATTACHMENTS

2a. The objective of this criterion is to eliminate behavior problems which cannot be handled by Mountain-Plains. Adults with a history of criminal behavior of a chronic nature are not acceptable. Chronic refers to two or more incidents (felonies, misdemeanors, or other similar identifiable behavior) in the last year or one incident during the past year with other like incident(s) in previous year(s). Adults who have not been convicted, but who have exhibited behavior in the past year, such as physical abuse toward anyone or any malicious destruction of any property are not acceptable. Insofar as it is possible, persons with character deficiencies should be screened out. This is a judgment area. Some guidelines for identifying a character problem are self-centered personality, lack of ability to differentiate between right and wrong, manipulation of people for their own gratification, lying and lack of sincerity. These people are usually very verbal and appear quite intelligent. Any person possessing three or more of these qualities should be examined more closely by checking additional collateral resources.

There are children which Mountain-Plains cannot handle. An acting out, disruptive child who is uncontrolled by his/her parents disqualifies that family from participation. For example, children who run away from home, who destroy property, who physically abuse themselves or others, or who are chronically traunt disqualify the family.

2b. Information pertaining to this criterion may be gathered from one of the following sources:

Interview with family
School records of children age 6 and over
Police records
Sheriff records
Juvenile court records
Adult court records
Mental Health Clinic
Hospitals (including Mental)
Neighbors
Relatives
Local Bartenders
Welfare Departments
Family Service Agencies
Any other social service agencies

5a. Mountain-Plains cannot deal with the drunk or wel alcholic. Recognizing that few people will admit alcohol problems, it is necessary to watch for signals. Ther person admitting to being an alcoholic is usually a pretty safe bet because the problem has been recognized and dealt with.

5b. Some indicators of a current alcoholic problems are:

Separations of husband and wife
Money problems
Poor employment record
Automobile violations
Felonies or misdemeanors
Health problems

Some places to gather information on alcohol abuse are:

Former employers
Family interview - Family Budget
Police records
Sheriff's records
Court records
Alcoholism Referral Center
Physician & Hospital
Neighbors
Relatives
Local bartender and other businessmen (in small towns)
Motor Vehicle Department
Alcoholism Rehabilitation Center
Welfare Departments
Family Service Agency
Any other social service agencies

SELECTION CRITERIA

Criteria Statement	Indicators and/or Measurement Technique
CRITERIA TIED TO PROGRAM LOGISTICS (CAPABILITIES)	
1. No families will be allowed who must pay out more than $70/month to cover debts or prior obligations (alimony or child support.)	1. Credit records Previous marriage records Court records Interview with family
2. No persons with legal or civil sults pending will be allowed unless acceptance by Mountain-Plains will satisfy the legal obligation.	2. Court and polic check.
3. No cars will be allowed without the minimum insurance coverage of the state of registration. (AF Regs.)	3. Verification of insurance in the appropriate amount according to state of registration.
4. No persons with the following health problems will be allowed: a. diabetes not controlled or with complications b. epilepsy with more than three seizures per year c. history of previous myocardial infraction with congestive heart failure or other complications. d. Tuberculosis active or positive X-Ray e. Cancer - past or active f. physical or structural disability that restricts mobility or required help from others g. active venereal disease h. malignant hypertension f. vision not capable of reading newsprint - 16" to 18" vision (This will not be a screen out if vision is correctable.)	4. Physical examination Medical Histories (done at Center as indicated.) Those selectees eligible for Welfare or DVR should have physicals done.

Criteria Statement	Indicators and/or Measurement Technique
j. hearing loss greater than 30% k. pulmonary disease that restricts activities of daily living l. any other physical defect or disease which would interfere with a schooling program or job opportunity after training m. unrehabilitated orthopedic problems n. psychiatric problems (as indicated by personal contact and/or additional data from other agencies) o. dental problems serious enough to require full mouth extraction or dental plates	
5. All persons must have at least one functional arm and hand.	5. Interview observation
6. Any spouse or female head-of-household with a confirmed pregnancy, must sign a Statement of Intent to pay all expenses (will not be covered by Mountain-Plains insurance).	6. Statement
7. Applicant will agree (on Participant Agreement Form) to participate, for a period of about one mouth (standard schedule) in a variety of programs including: Health Home Management Leisure Skills Early Childhood Foundation Education Career Preparation Goal Setting & Problem Solvin	7. Applicant indicates understanding of program expectations and signs agreement form.

Criteria Statement	Indicators and/or Measurement Technique
Participant will then be assisted in scheduling a program to satisfy his interests and needs.	
8. No heads-of-households will be allowed under age of 18 or over age of 50.	8. Birth certificate or other suitable reference.
9. After reaching 200 families. scheduling must provide for size of family/size of housing unit availability.	9. Housing availability
10. Acceptable family size for participation. Two parent families with up to 6 children. One parent families with one to four children.	10. Interview

Criteria Statement	Indicators and/or Measurement Technique
CRITERIA TIED TO EXTERNAL OBJECTIVES	
1. Head-of-Household will not be eligible to participate at Mountain-Plains if he/she:	1. Interview
A. Currently possess saleable skills in the area of his interest and just wants technical upgrading.	A. Family B. Previous employer
B. Desires skills that are not available at Mountain-Plains.	
C. Has participated in two or more other training programs (except training provided by military service) within the last five years.	